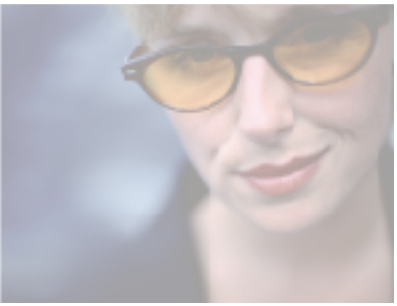
Gateway 920 Server

# user's guide



Customizing | Troubleshooting

Gateway™

# Contents


**1 Checking Out Your Gateway Server . . . . . 1**

Front . . . . . 2
Back . . . . . 4
System board . . . . . 6
Getting Help . . . . . 7
Server Companion CD . . . . . 7
Online help . . . . . 7
Gateway Web site . . . . . 7

**2 Setting Up Your Server . . . . . 9**

Setting up the hardware . . . . . 10
Protecting from power source problems . . . . . 11
Starting your server . . . . . 13
Understanding the power-on self-test . . . . . 14
Turning off your server . . . . . 15
Restarting (rebooting) your server . . . . . 16
Setting up the operating system . . . . . 17

**3 Maintaining Your Server . . . . . 19**

Caring for your server . . . . . 20
Protecting your server from viruses . . . . . 22
Managing hard drive space . . . . . 23
Checking hard drive space . . . . . 23
Using Disk Cleanup . . . . . 24
Checking the hard drive for errors . . . . . 24
Defragmenting the hard drive . . . . . 25
Backing up files . . . . . 27
Cleaning your server . . . . . 28
Cleaning the exterior . . . . . 28
Cleaning the keyboard . . . . . 29
Cleaning the screen . . . . . 29
Cleaning the tape drive . . . . . 29
Cleaning the mouse . . . . . 30
Preparing for system recovery . . . . . 32
Creating startup diskettes . . . . . 32
Creating an emergency repair diskette . . . . . 32
Keeping a record of system configuration . . . . . 35
System administration . . . . . 36
ManageX Event Manager . . . . . 36

Server security . . . . . 36
Using your Server Companion CD . . . . . 38

**4 Installing Components . . . . . 39**

Preparing to install components . . . . . 40
Selecting a place to work . . . . . 40
Gathering the tools you need . . . . . 40
Preventing static electricity discharge . . . . . 41
Opening the server case . . . . . 42
Closing the server case . . . . . 44
Installing drives . . . . . 45
Installing a CD or diskette drive . . . . . 46
Installing a hard drive . . . . . 51
Installing memory . . . . . 54
Installing PCI expansion cards . . . . . 56
Replacing the processor . . . . . 58
Replacing the power supply . . . . . 61
Replacing the system board . . . . . 63
Replacing the case fan . . . . . 66
Replacing the CMOS battery . . . . . 68

**5 Using the BIOS Setup Utility . . . . . 71**

Opening the BIOS Setup utility . . . . . 72
Updating the BIOS . . . . . 73
Recovering the BIOS . . . . . 73
Resetting the BIOS . . . . . 75
Bypassing the BIOS passwords . . . . . 77

**6 Troubleshooting . . . . . 79**

Safety guidelines . . . . . 80
Error messages . . . . . 81
Troubleshooting . . . . . 85
First steps . . . . . 85
Battery replacement . . . . . 86
Beep codes . . . . . 86
BIOS . . . . . 88
CD drive . . . . . 88
Cleaning CDs . . . . . 89
Diskette drive . . . . . 89
Expansion cards . . . . . 90
File management . . . . . 90
Hard drive . . . . . 91

Internet . . . 93
Keyboard . . . 94
Memory . . . 95
Modem (telephone dial-up) . . . 95
Monitor . . . 98
Mouse . . . 99
Power . . . 100
Printer . . . 100
Processor . . . 102
Telephone support . . . 103
Before calling Gateway Technical Support . . . 103
Telephone support . . . 104
Tutoring and training . . . 105

**A Server Specifications . . . 107**

System specifications . . . 108
System board specifications . . . 109
Hardware monitor specifications . . . 110
Temperature sensor specifications . . . 111
Environmental specifications . . . 112
Video specifications . . . 113
Resolution support . . . 113
Electronic specifications . . . 114
System I/O addresses . . . 114
Memory map . . . 117
IRQ assignments . . . 118
PCI interrupt routing . . . 119
Additional specifications . . . 121

**B BIOS Settings . . . 123**

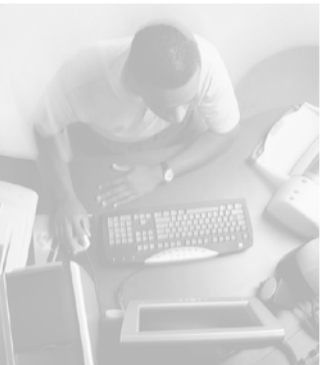
**C Safety, Regulatory, and Legal Information . . . 129**

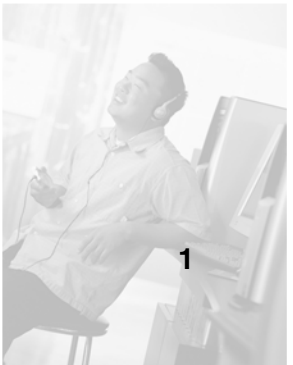
**Index . . . 137**

# 1 Checking Out Your Gateway Server

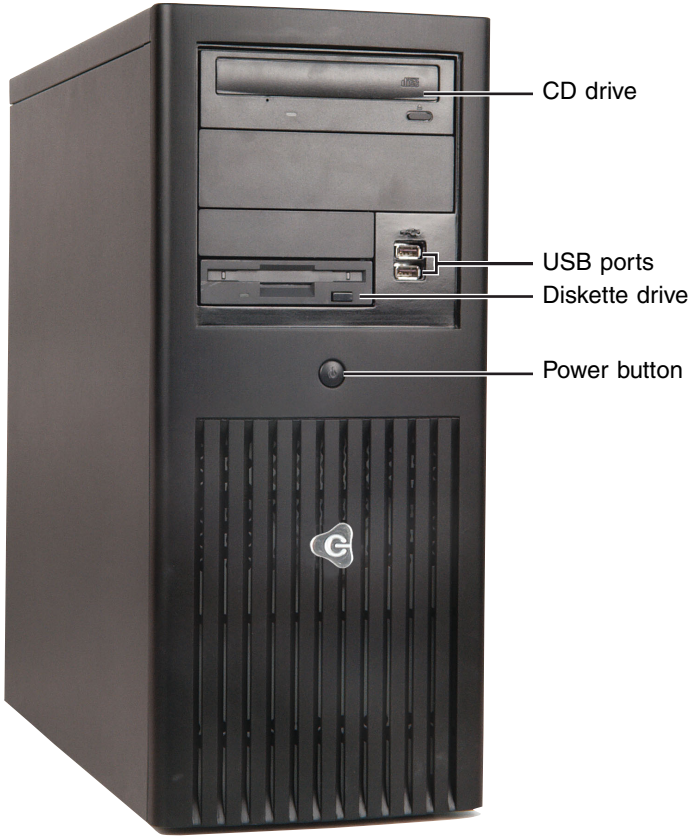
Read this chapter to learn:

- Where drives, ports, jacks, and controls are located
- Where system board components are located
- What help resources are available



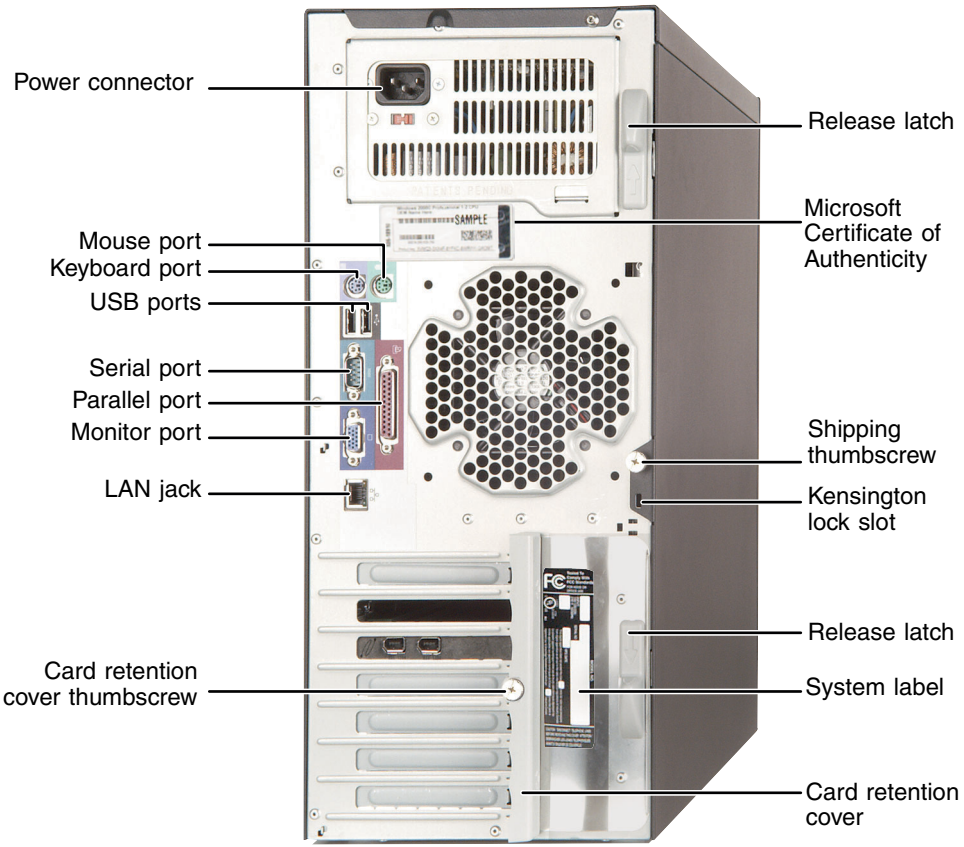


# Front



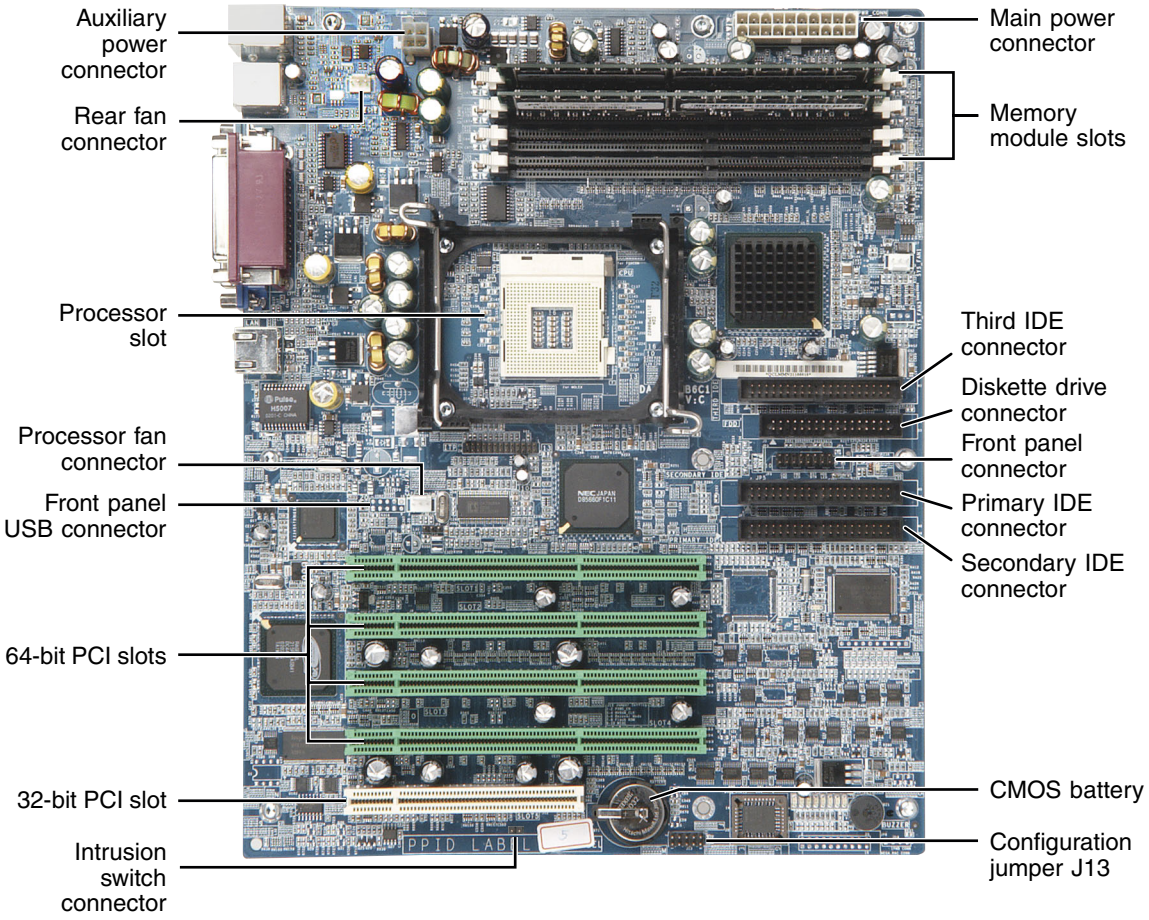
| Component | Description |
|---|---|
| CD drive | Insert a CD into this drive. |
| USB ports | Plug USB devices into these ports. |
| Diskette drive | Insert a 3.5-inch diskette into this drive. |
| Power button | Press this button to turn the power on or off.<br>▪ No LED means that the server is turned off.<br>▪ An orange LED means that the server is in Standby.<br>▪ A green LED means that the server is turned on. |

# Back


Power connector
Mouse port
Keyboard port
USB ports
Serial port
Parallel port
Monitor port
LAN jack
Card retention cover thumbscrew
Release latch
Microsoft Certificate of Authenticity
Shipping thumbscrew
Kensington lock slot
Release latch
System label
Card retention cover

| Component | Description |
|---|---|
| Power connector | Plug the power cord into this connector. |
| Mouse port | Plug a PS/2 (Personal System/2®) mouse into this port. |
| Keyboard port | Plug a PS/2 keyboard into this port. |
| USB ports | Plug USB devices into these ports. |
| Serial port | Plug a serial device into this port. |
| Parallel port | Plug a parallel device into this port. |
| Monitor port | Plug a monitor into this port. |
| LAN jack | Plug an Ethernet RJ-45 cable into this jack. |
| Card retention cover thumbscrew | Remove this thumbscrew to release the card retention cover, and install this thumbscrew to secure the cover. |
| Release latches | Push these latches apart to release and remove the side panel. |
| Microsoft Certificate of Authenticity | Contains your Windows product key. |
| Shipping thumbscrew | Remove this thumbscrew to open the side panel. This thumbscrew secures the side panel during shipment. |
| Kensington lock slot | Connect a Kensington cable lock to this slot to prevent the server case from being opened. |
| System label | Includes your server's model and serial number. |
| Card retention cover | Pull this cover out to release expansion cards, and press it in to secure the cards. |

# System board



# Getting Help

In addition to your operating system's documentation, there are additional information resources available to help you use your server.

## Server Companion CD

Use the *Server Companion CD* to access file utilities and documentation for your server and its components. For more information, see *Using Your Server Companion CD*.

## Online help

Many programs provide information online so you can research a topic or learn how to perform a task while you are using the program. Most online help information can be accessed by selecting a topic from a **Help** menu or by clicking a **Help** button.

You can search for information by viewing the help contents, checking the index, searching for a topic or keyword, or browsing through the online help.

## Gateway Web site

Gateway provides a variety of information on its Web site to help you use your server.

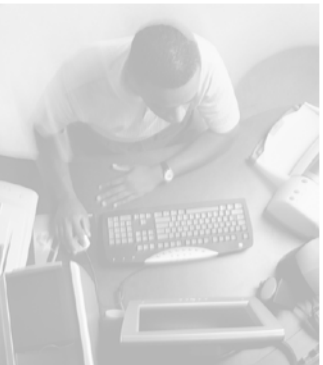
Visit the Gateway Web site at support.gateway.com for:

- Technical documentation and product guides
- Technical tips and support
- Updated hardware drivers
- Order status
- Frequently asked questions (FAQs)

# 2 Setting Up Your Server

Read this chapter to learn how to:

- Use your server safely
- Start and turn off your server
- Restart (reboot) your server
- Set up your operating system



# Setting up the hardware

To make sure that your working environment is safe:

- Use a clean, dry, flat, stable surface for your server. Allow at least 6 inches at the rear of the server for cabling and air circulation.
- Use the instructions on your server's setup poster to set up your hardware.
- Use a grounded (three-prong) surface protector. A surge protector helps protect against AC power fluctuations. For additional protection from power outages, we recommend that you use an uninterruptible power supply (UPS).

**Warning**

Your server is supplied with a 3-wire AC power cord fitted with the correct plug style for your region. If this plug does not match the connector on your surge protector, UPS, or wall outlet, do not attempt to modify the plug in any way. Use a surge protector, UPS, or wall outlet that is appropriate for the supplied AC power cord.

- Avoid subjecting your server to extreme temperature changes. Do not expose your server to direct sunlight, heating ducts, or other heat-generating objects. Damage caused by extreme temperatures is not covered by your warranty. As a general rule, your server is safest at temperatures that are comfortable for you.
- Keep your server and magnetic media away from equipment that generates magnetic fields, such as unshielded stereo speakers. Strong magnetic fields can erase data on both diskettes and hard drives. Even a telephone placed too close to the server may cause interference.

**Important**

Keep the server boxes and packing material in case you need to send the server to Gateway for service. If you return your server in different packaging, your warranty may be voided.

# Protecting from power source problems

Surge protectors, line conditioners, and uninterruptible power supplies can help protect your server against power source problems.

### Surge protectors

During a power surge, the voltage level of electricity coming into your server can increase to far above normal levels and cause data loss or server damage. Protect your server and peripheral devices by connecting them to a surge protector, which absorbs voltage surges and prevents them from reaching your server.

**Warning**

High voltages can enter your server through the power cord, modem connection, and network connection. Protect your server by using a surge protector. If you have a modem, use a surge protector that has the appropriate type of modem jack. During an electrical storm, unplug both the surge protector and the modem.

When your purchase a surge protector:

- Make sure that the surge protector meets the appropriate product safety certification for your location, such as Underwriters Laboratories (UL).
- Check the maximum amount of voltage the protector allows to pass through the line. The lower the voltage that the protector allows to pass through, the better the protection for your server.
- Check the energy absorption (*dissipation)* rating. The higher the energy absorption rating, the better the protection for your server.
- Check for line-conditioner capabilities. A line conditioner smooths out some of the normal line noise (small voltage fluctuations) of an electrical supply.

### Line conditioners

A line conditioner protects your server from the small fluctuations in voltage from an electrical supply. Most servers can handle this variation, called *line noise,* without problems. However, some electrical sources include more line noise than normal. Line noise can also be a problem if your server is located near, or shares a circuit with, a device that causes electromagnetic interference, such as a television or a motor.

Some surge protectors and uninterruptible power supplies include simple line-conditioning capabilities.

### Uninterruptible power supplies

Use an uninterruptible power supply (UPS) to protect your server from data loss during a total power failure. A UPS uses a battery to keep your server running temporarily during a power failure and lets you save your work and shut down your server. You cannot run your server for an extended period of time while using only the UPS. To buy a UPS, visit accessories.gateway.com.

# Starting your server

Before you start your server for the first time:

- Make sure that the server and monitor are plugged into a power outlet or surge protector and that the surge protector (if you are using one) is turned on.
- Make sure that all cables are firmly connected to the correct ports and jacks on the back of the server.

**Warning**

When you connect peripheral devices to the server, make sure that your server and devices are turned off and the power cords are unplugged.

## To start the server:

1 Press the power button.

| When the power button LED is... | It means... |
|---|---|
| Green | The server is turned on. |
| Orange | The server is in Standby. |
| Off | The server is turned off. |

If nothing happens when you press the power button:

- Make sure that the power cables are plugged in securely and that your surge protector (if you are using one) is plugged in and turned on.
- Make sure that the monitor is connected to the server, plugged into the power outlet or surge protector, and turned on. You may also need to adjust the monitor's brightness and contrast controls.

2 The first time you turn on the server, any pre-installed operating system may begin asking you for configuration settings. See your operating system's documentation for instructions on configuring advanced settings for your specific network, or see the *Installing Windows 2000 Server* installation guide.

# Understanding the power-on self-test

When you turn on your server, the power-on self-test (POST) routine checks the server memory and components. If POST finds any problems, the server displays error messages. Write down any error messages that you see, then see "Error messages" on page 81 and "Beep codes" on page 86 for troubleshooting information.

# Turning off your server

Every time you turn off your server, first shut down the operating system. You may lose data if you do not follow the correct procedure.

## To turn off the server:

1. In Windows 2000 Server, click **Start**, then click **Shut Down**. The *Shut Down Windows* dialog box opens. Click the arrow button to open the **What do you want the computer to do** list, click **Shut down**, then click **OK**.

   - OR -

   If your server is running a different operating system, see the operating system's documentation for instructions on shutting down the operating system. Whenever possible, you should use the operating system's shut down procedure instead of pushing the power button.

2. If your server did not turn off automatically, press the power button. If nothing happens when you press the power button, press and hold it for five seconds and the server will turn off.

**Warning**

The power button on the server does not turn off server AC power. To remove AC power from the server, you must unplug the AC power cord from the wall outlet or power source. The power cord is considered the disconnect device to the main (AC) power.

**Warning**

If you routinely turn off your server (daily or weekly), do not unplug the server or use the On/Off switch on the surge protector. Regularly cutting off all power to your server may cause the CMOS battery to fail prematurely.

# Restarting (rebooting) your server

If your server does not respond to keyboard or mouse input, you may have to close programs that are not responding. If closing unresponsive programs does not restore your server to normal operation, you may have to restart (reboot) your server.

## To close unresponsive programs and restart your server in Windows 2000 Server:

1. Press CTRL+ALT+DELETE, then click **Task Manager**. A window opens that lets you close a program that is not responding.
2. Click the program that is not responding, then click **End Task**.
3. If your server does not respond, turn it off, wait ten seconds and turn it on again.

**Important**

If your computer does not turn off immediately, you may need to press and hold the power button for about five seconds.

# Setting up the operating system

If you ordered your server with the operating system already installed by Gateway, Windows 2000 Server is completely installed and the basic settings are already configured. See your operating system's documentation for instructions on configuring advanced settings for your specific network.

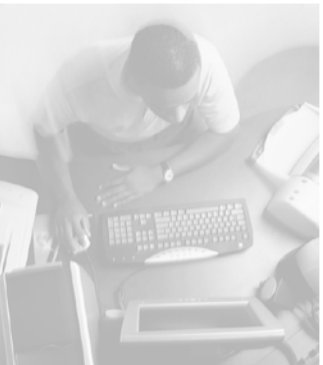
If you are installing Windows 2000 Server because it was not already installed by Gateway, see the *Installing Windows 2000 Server* installation guide for instructions.

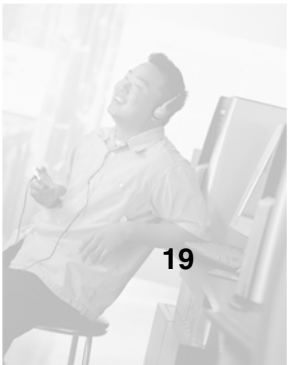
If you are installing a non-Windows operating system, see your operating system's documentation for instructions.

# 3 Maintaining Your Server

Read this chapter to learn how to:

- Care for your server
- Protect your server from viruses
- Manage hard drive space
- Clean your server
- Prepare for system recovery
- Perform system administration





# Caring for your server

To extend the life of your server:

- Be careful not to bump or drop your server, and do not put any objects on top of it. The case, although strong, is not made to support extra weight.
- When transporting your server, we recommend that you put it in the original packaging materials.
- Keep your server and magnetic media away from equipment that generates magnetic fields, such as unshielded stereo speakers. Strong magnetic fields can erase data on both diskettes and hard drives. Even a telephone placed too close to the server may cause interference.
- Avoid subjecting your server to extreme temperature changes. Do not expose your server to direct sunlight, heating ducts, or other heat-generating objects. Damage caused by extreme temperatures is not covered by your warranty. As a general rule, your server is safest at temperatures that are comfortable for you.
- Keep all liquids away from your server. When spilled onto server components, almost any liquid can result in extremely expensive repairs that are not covered under your warranty.
- Avoid dusty or dirty work environments. Dust and dirt can clog the internal mechanisms and can cause the server to overheat.

Use the following table to set up a regular maintenance schedule, which will keep your server running at its best.

| Maintenance task | Immediately after purchase | Weekly | When needed | See... |
|---|---|---|---|---|
| Check for viruses | | X | X | page 22 |
| Clean up hard drives | | X | X | page 24 |
| Scan hard drive for errors | | X | X | page 24 |
| Defragment hard drive | | X | X | page 25 |
| Back up files | | | X | page 27 |
| Clean tape backup drive | | | X | page 29 and the drive's documentation |
| Clean server case | | | X | page 28 |
| Clean keyboard | | | X | page 29 |
| Clean screen | | | X | page 29 |
| Clean mouse | | | X | page 30 |
| Create startup diskettes | X | | | page 32 |
| Create emergency repair diskette | | | X | page 32 |

# Protecting your server from viruses

A *virus* is a program that attaches itself to a file on a computer, then spreads from one computer to another. Viruses can damage data or cause your server to malfunction. Some viruses go undetected for a period of time because they are activated on a certain date.

A server that can access the Internet is more likely to get a virus than one that cannot access the Internet. Viruses can also be uploaded by network users who have shared file access or physical access to the server.

Protect your server from a virus by:

- Using a virus-checking program (not included) to check files on hard drives or removable media. See your program's documentation for more information.
- Checking all programs for viruses before installing them.
- Periodically updating your virus-checking program to protect against the latest viruses.

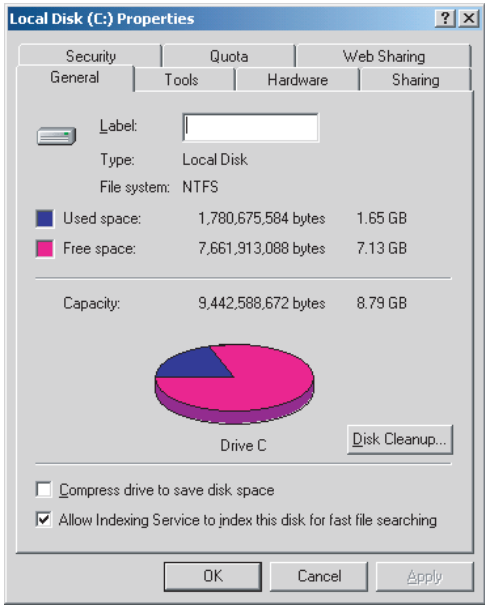
# Managing hard drive space

## Checking hard drive space

If your server is running an operating system other than Windows 2000 Server, see the operating system's documentation for instructions on checking hard drive space.

### To check hard drive space in Windows 2000 Server:

1. Double-click the **My Computer** icon.
2. Right-click the drive that you want to check for available file space, then click **Properties**. Drive space information appears.



# Using Disk Cleanup

Delete unneeded files, such as temporary Windows files, to free hard drive space. If your server is running an operating system other than Windows 2000 Server, see the operating system's documentation for instructions on deleting unnecessary files.

### To use Disk Cleanup in Windows 2000 Server:

1. Double-click the **My Computer** icon.
2. Right-click the hard drive that you want to delete files from, for example Local Disk (C:), then click **Properties**. The *Properties* dialog box opens at the General tab.
3. Click **Disk Cleanup**. The *Disk Cleanup* dialog box opens.
4. Make sure that the checkbox next to each file type you want to delete is selected. For more information about file types you can delete, read the descriptions in the *Disk Cleanup* dialog box.
5. Click **OK**, then click **Yes**.

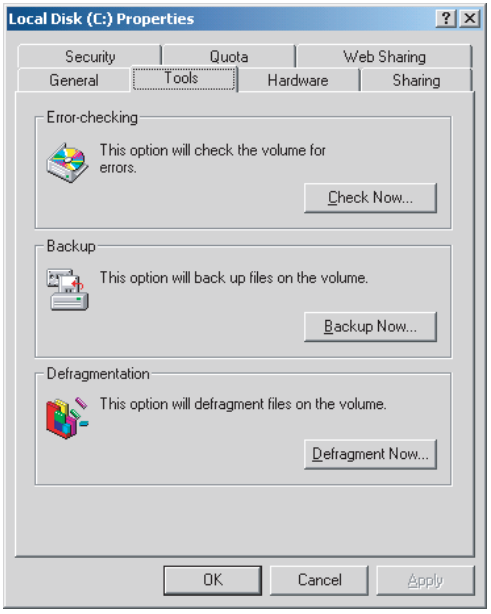
# Checking the hard drive for errors

Hard drive error-checking programs examine the hard drive for physical flaws and file and folder problems. These programs correct file and folder problems and mark flawed areas on the hard drive so the operating system does not use them. If your server is running an operating system other than Windows 2000 Server, see the operating system's documentation for instructions on checking the hard drive for errors.

### To check the hard drive for errors in Windows 2000 Server:

1. Double-click the **My Computer** icon.
2. Right-click the hard drive that you want to check for errors, for example Local Disk (C:), then click **Properties**. The *Properties* dialog box opens.

3 Click the **Tools** tab.




4 Click **Check Now**.

5 Click the options to use, then click **Start**. For help, press **F1**. Windows checks the drive for errors. This process may take several minutes.

6 Correct any problems that are found by following the on-screen instructions. After Windows has finished checking the drive for errors, it provides a summary of any problems that it may have found.

7 Click **OK**.

# Defragmenting the hard drive

When working with files, your operating system divides the file information into pieces and stores them in different places on the hard drive. This is called *fragmentation*, and it is normal. In order for your server to use a file, your operating system must search for the pieces of the file and put them back together. This process slows hard drive performance.

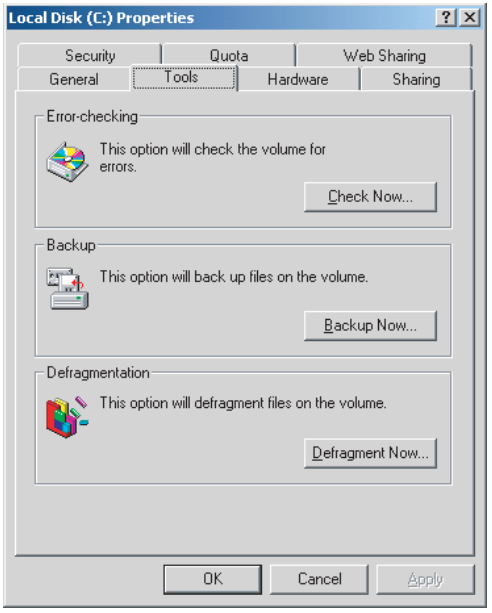
In Windows 2000 Server, the Disk Defragmenter program organizes the data on the drive so each file is stored as one unit rather than as multiple pieces scattered across different areas of the drive. Defragmenting the information stored on the drive can improve hard drive performance.

While Disk Defragmenter is running, do not use your keyboard or mouse because using them may continuously stop and restart the defragmenting process. Also, disconnect your server from the network while defragmenting because network communication may stop the defragmentation process and cause it to start over.

If your server is running an operating system other than Windows 2000 Server, see the operating system's documentation for instructions on defragmenting files.

## To defragment a drive in Windows 2000 Server:

1. Double-click the **My Computer** icon.
2. Right-click the hard drive that you want to defragment, for example Local Disk (C:), then click **Properties**. The *Properties* dialog box opens.
3. Click the **Tools** tab.



4 Click **Defragment Now**.

5 Click **Action**, then click **Defragment**.

Disk Defragmenter shows its progress on the screen. When finished, Disk Defragmenter asks if you want to quit the program.

6 Click **Close**.

# Backing up files

Backing up files and removing them from the hard drive frees space for new files on the hard drive. It also protects you from losing important information if the hard drive fails or you accidentally delete files. You should back up your files regularly to a high-capacity backup device, such as a tape drive. For information on using your backup device to back up your files, see the device's documentation. To buy a tape backup drive visit the accessories store at accessories.gateway.com.

You should also periodically test the reliability of your backup device and procedures by performing a system restoration using your backup media.

# Cleaning your server

Keeping your server clean and the vents free from dust helps keep your server performing at its best. You may want to gather these items and put together a server cleaning kit:

- A soft, lint-free cloth
- Glass cleaner
- An aerosol can of air that has a narrow, straw-like extension
- Isopropyl alcohol
- Cotton swabs
- A tape drive cleaning cartridge (if a tape drive is installed)
- A CD drive cleaning kit

## Cleaning the exterior

**Warning**

When you shut down your server, the power turns off, but some electrical current still flows through your server. To avoid possible injury from electrical shock, unplug the power cord and all other cables connected to the server.

Always turn off your server and other peripheral devices before cleaning any components.

Use a damp, lint-free cloth to clean your server and other parts of your system. Do not use abrasive or solvent cleaners because they can damage the finish on components.

Your server is cooled by air circulated through the vents on the case, so keep the vents free of dust. With your server turned off and unplugged, brush the dust away from the vents with a damp cloth. Be careful not to drip any water into the vents.

# Cleaning the keyboard

You should clean the keyboard occasionally by using an aerosol can of air with a narrow, straw-like extension to remove dust and lint trapped under the keys.

If you spill liquid on the keyboard, turn off your server and turn the keyboard upside down. Let the liquid drain, then let the keyboard dry before trying to use it again. If the keyboard does not work after it dries, you may need to replace it. Keyboard damage resulting from spilled liquids is not covered by your warranty.

# Cleaning the screen

If your computer screen is a flat panel display, use a soft cloth and water to clean the computer screen. Squirt a little water on the cloth (never directly on the screen), and wipe the screen with the cloth.

**Warning**

The computer screen is made of specially coated glass and can be scratched or damaged by abrasive or ammonia-based glass cleaners.

- OR -

If your computer screen is not a flat panel display, use a soft cloth and glass cleaner to clean the monitor screen. Squirt a little cleaner on the cloth (never directly on the screen), and wipe the screen with the cloth.

# Cleaning the tape drive

If you use a tape drive to back up your files, regular maintenance will lengthen the life of the drive. To maintain the drive's reliability:

- Clean the drive monthly with the cleaning cartridge included with the drive.
- Remove the tape from the drive whenever the drive is not being actively used.

# Cleaning the mouse

If the mouse pointer begins moving erratically across the screen or becomes difficult to control precisely, cleaning the mouse will likely improve its accuracy.

If you have an optical mouse, clean the mouse by wiping the bottom of the mouse with a clean cloth.

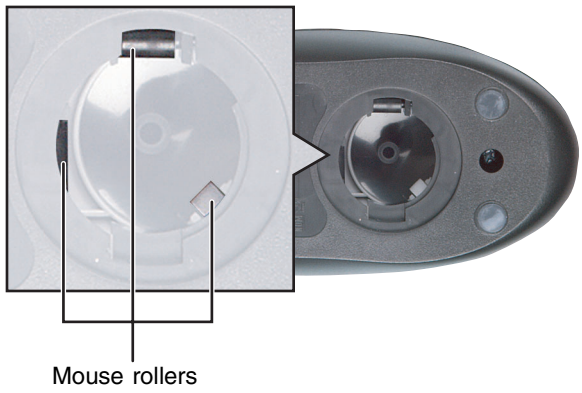
If you have a trackball mouse, follow these instructions.

## To clean your trackball mouse:

1. Turn the mouse upside down.
2. Rotate the retaining ring on the bottom of the mouse counter-clockwise, then remove the retaining ring and mouse ball.

3. Remove any dust, lint, or dirt from the mouse ball with a soft cloth.

**4** Clean the mouse rollers with a cotton swab dipped in isopropyl alcohol.




**5** Replace the mouse ball and lock the retaining ring into place.

# Preparing for system recovery

You should take precautions that will make it easier to reinstall or repair your operating system if system files become corrupted. These precautions make it easier to restart your server and recover damaged files.

## Creating startup diskettes

If your system files are corrupted, you may not be able to start the server from the hard drive. *Startup diskettes* are diskettes that let you start the server and attempt to fix the problem. If your server is running an operating system other than Windows 2000 Server, see your operating system's online help or documentation for instructions on creating startup diskettes.

### To create startup diskettes in Windows 2000 Server:

1. Format four 3.5-inch 1.44 MB diskettes.
2. Insert one diskette into the diskette drive of a computer running any version of Windows or MS-DOS.
3. Insert the *Windows 2000 Server* CD into the CD drive.
4. Click **Start**, then click **Run**.
5. Type **d:\bootdisk\makeboot a:** (where **d:** is the letter assigned to your CD drive).
6. Click **OK**, then follow the on-screen prompts.

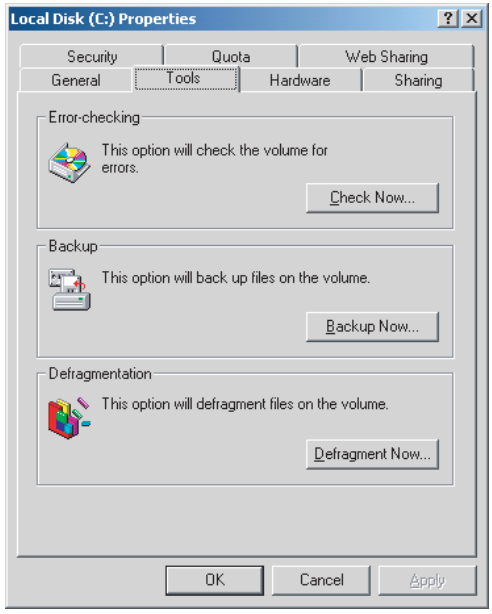
## Creating an emergency repair diskette

Windows 2000 Server lets you create an emergency repair diskette to back up critical operating system files, including the registry. The emergency repair diskette is not a bootable diskette. For instructions on using the diskette, see your Windows 2000 Server documentation or online help.

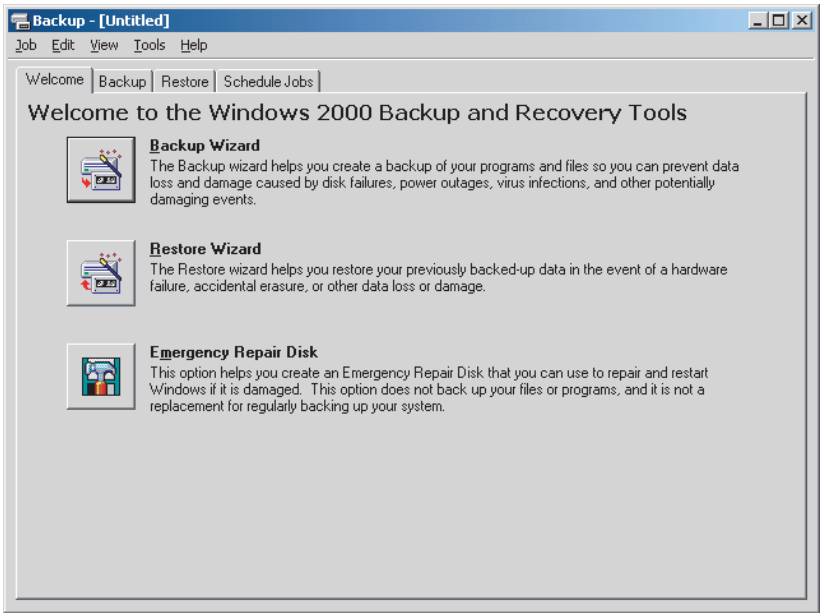
If your server is running an operating system other than Windows 2000 Server, see your operating system's online help or documentation for instructions on creating repair diskettes.

## To create an emergency repair diskette in Windows 2000 Server:

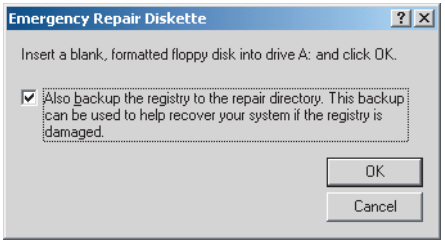
1. Format one 3.5-inch 1.44 MB diskette and insert it into your server's diskette drive.
2. Double-click the **My Computer** icon.
3. Right-click the C: drive, then click **Properties**. The *Properties* dialog box opens.
4. Click the **Tools** tab.



5 Click **Backup Now**. The *Backup* window opens.


Backup - [Untitled]
Job Edit View Tools Help
Welcome Backup Restore Schedule Jobs
Welcome to the Windows 2000 Backup and Recovery Tools
Backup Wizard
The Backup wizard helps you create a backup of your programs and files so you can prevent data loss and damage caused by disk failures, power outages, virus infections, and other potentially damaging events.
Restore Wizard
The Restore wizard helps you restore your previously backed-up data in the event of a hardware failure, accidental erasure, or other data loss or damage.
Emergency Repair Disk
This option helps you create an Emergency Repair Disk that you can use to repair and restart Windows if it is damaged. This option does not back up your files or programs, and it is not a replacement for regularly backing up your system.

6 Click **Emergency Repair Disk**. The *Emergency Repair Diskette* dialog box opens.


Emergency Repair Diskette
Insert a blank, formatted floppy disk into drive A: and click OK.
Also backup the registry to the repair directory. This backup can be used to help recover your system if the registry is damaged.
OK
Cancel

7 Click the **Also back up the registry to the repair directory** check box, then click **OK**. The files are backed up to the diskette.

# Keeping a record of system configuration

## Recording your operating system configuration

Some operating systems let you print a summary of the configuration of your server and the memory allocation. This printed summary can provide information you need to reset your system configuration correctly if the information is lost. If your server is running an operating system other than Windows 2000 Server, see the operating system's documentation for instructions on recording your system configuration.

### To record your operating system configuration in Windows 2000 Server:

1. Click **Start**, **Programs**, **Administration tools**, then click **Computer Management**.
2. Click **System Information**. Information about your system appears in the window to the right. For more specific system information, click on the appropriate folder under **System Information**.
3. To print a detailed report of your system's configuration, click **Action**, then click **Print**.
4. To save a detailed report of your system's configuration as a text file, click **Action**, then click **Save As Text File**.

## Recording your BIOS configuration

Some server information can be viewed only in the BIOS Setup utility.

### To record your BIOS configuration:

1. Print the appendix for BIOS Settings in this guide.
2. Restart your server, then press **F2** when the Gateway logo screen appears during startup. The BIOS Setup utility opens.
3. Record the BIOS settings on your printout.

# System administration

## ManageX Event Manager

ManageX lets you manage multiple computers on a Windows 2000 Server or Novell Netware network from a single window, then implement commands and policies across the network with a single action. With ManageX you can run system management tasks which are triggered by certain events or conditions.

You can find additional documentation for ManageX Event Manager on the *Server Companion CD* and the *ManageX Event Manager* CD.

## Server security

To prevent unauthorized use of the server, you can set BIOS startup passwords. To monitor unauthorized access to server components, you can view the event log.

### Using BIOS security passwords

Set up an administrator password to prevent unauthorized access to the BIOS Setup utility. After you create an administrator password, you can set up a user password to prevent unauthorized access to the server. After you set up passwords, you must enter the correct password to start the server and the BIOS Setup utility.

- Enter either password to finish starting the server.
- Enter the administrator password for access to the BIOS Setup utility.

**To set the BIOS security passwords:**

1. Restart your server, then press **F2** when the Gateway logo screen appears during startup. The BIOS Setup utility opens.
2. Select the **Security** menu.
3. Select the password to set according to the following table.

| Option | Description |
|---|---|
| Supervisor password | To control access to system configuration, set a supervisor password. Using a supervisor password lets you make changes to any setting in the BIOS.<br>Passwords can be temporarily disabled. To bypass the passwords, see "Bypassing the BIOS passwords" on page 77. |
| User password | To control access to the server, set a user password. The supervisor can set the level of access granted to the user password. The user password access levels are:<br>▪ **No Access**. User cannot access the BIOS Setup utility.<br>▪ **Limited**. User can change only the date and time.<br>▪ **View Only**. User can see all settings, but cannot change them.<br>▪ **Full**. User can change every setting except the supervisor password.<br><br>Passwords can be temporarily disabled. To bypass the passwords, see "Bypassing the BIOS passwords" on page 77. |

4 Type the password and press ENTER, then type it again and press ENTER.

5 Exit the BIOS Setup utility.

For information about bypassing BIOS passwords, see "Bypassing the BIOS passwords" on page 77.

## Monitoring case access

Whenever the server's case cover is removed, the intrusion switch is activated and an event is recorded in the event log.

### To view the event log:

1 Restart your server, then press **F2** when the Gateway logo screen appears during startup. The BIOS Setup utility opens.

2 Open the **Advanced** menu, select **Event Log Configuration**, then select **Event Log Area**. The event log is shown on the screen.

# Using your Server Companion CD

You can use your *Server Companion CD* to:

- Install hardware drivers
- Install programs
- View server documentation

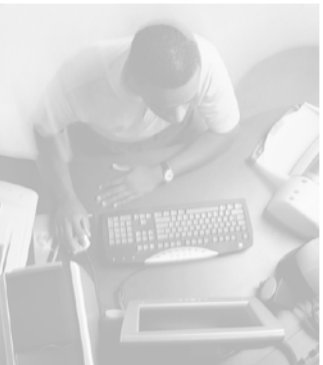
Instructions for using the CD are provided in *Using Your Server Companion CD*.

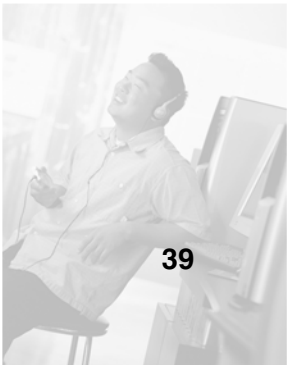
# 4 Installing Components

Read this chapter to learn how to:

- Open and close the server case
- Install drives
- Install memory modules
- Install expansion cards
- Replace the processor
- Replace the power supply
- Replace the system board
- Replace the rear case fan
- Replace the CMOS battery

You must open your server case to install components. If you are not comfortable with these procedures, get help from a more experienced computer user or computer service technician, or contact Gateway Technical Support.





# Preparing to install components

## Selecting a place to work

Work on your server in an area that:

- Is clean (avoid dusty areas)
- Is a low-static environment (avoid carpeted areas)
- Has a stable surface on which to set your server
- Has enough room to place all of your server parts
- Is near a grounded outlet so you can test your server after installation
- Is near a telephone (in case you need help from Gateway Technical Support). The telephone must be directly connected to a telephone jack and cannot be connected to your server.

## Gathering the tools you need

Some tools and supplies that you may need to work on your server are:

- A notebook to take notes
- A Phillips screwdriver
- A small flat-blade screwdriver
- Small containers to store various types of screws
- A grounding wrist strap (available at most electronic stores)

# Preventing static electricity discharge

The components inside your server are extremely sensitive to static electricity, also known as *electrostatic discharge* (ESD).

**Warning**

ESD can permanently damage electrostatic discharge-sensitive components in the server. Prevent ESD damage by following ESD guidelines every time you open the server case.

**Warning**

To avoid exposure to dangerous electrical voltages and moving parts, turn off your server and unplug the power cord and modem and network cables before opening the server case.

Before working with server components, follow these guidelines:

- Turn off the server, then unplug the power cord and all other cables.
- Drain any residual power from the server by pressing the power button.
- Wear a grounding wrist strap (available at most electronics stores) and attach it to a bare metal part of the server. You can also touch a bare metal surface on the back of the server with your finger.

**Warning**

To prevent risk of electric shock, do not insert any object into the vent holes of the power supply.

- Avoid static-causing surfaces such as carpeted floors, plastic, and packing foam.
- Avoid working on the server when your work area is extremely humid.
- Remove components from their antistatic bags only when you are ready to use them. Do not lay components on the outside of antistatic bags because only the inside of the bags provide electrostatic protection.
- Always hold expansion cards by their edges or their metal mounting brackets. Avoid touching the edge connectors and components on the cards. Never slide expansion cards or components over any surface.

# Opening the server case

Because the components inside your server are extremely sensitive to static electricity, make sure that you follow the instructions at the beginning of this chapter to avoid static electricity damage.

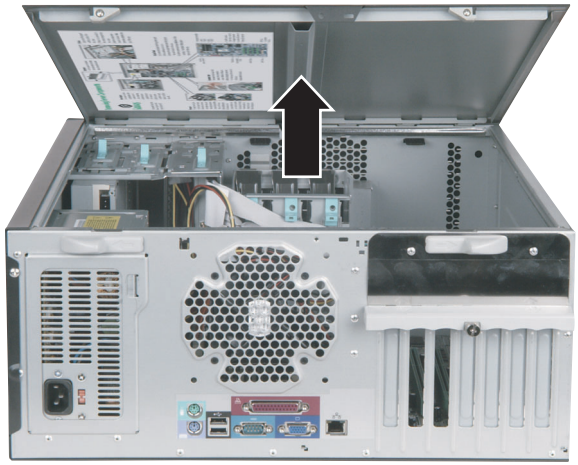
**Warning**

For correct cooling and air flow, always reinstall the side panel before you turn on the server. Operating the server without the cover in place can damage server components.

## To open the server case:

1. Follow the instructions in "Preventing static electricity discharge" on page 41.
2. Turn off the server, then disconnect the power cord and all other cables connected to the server.
3. For more stability, place the server on its side.
4. If your case has a shipping thumbscrew installed on the back, remove the screw, then push the cover release latches away from each other.

**5** Swing the side panel away from the case.



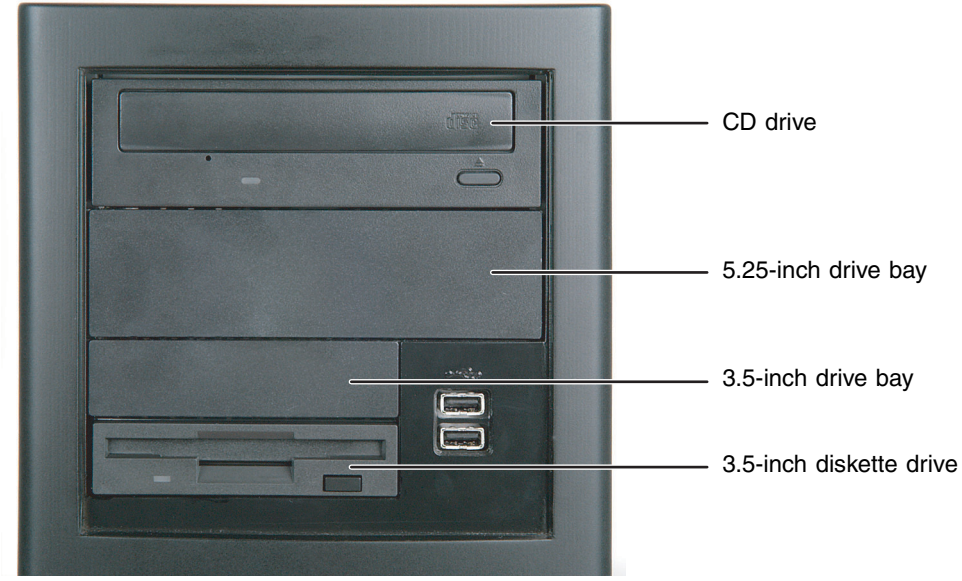
# Closing the server case

## To close the server case:

1. For more stability, place the server on its side.
2. Make sure that all of the internal cables are arranged inside the case so they will not be pinched when you close the server case.
3. Align the side panel's front tabs into the case notches, then swing the side panel toward the case until the release latches snap into place.
4. Return the case to its upright position.
5. Reconnect the power cord and all other cables.

# Installing drives

Your server comes with a CD drive and a 3.5-inch diskette drive. One additional 5.25-inch drive bay and one additional 3.5-inch drive bay are also provided for adding drives.




As you prepare to install drives, remember:

- Before you install a drive, see the drive's documentation for information on configuring the drive, setting drive jumpers, and attaching cables.
- If you are installing a drive that requires a controller card, install the card before you install the drive.

- IDE hard drives can be configured as single, master, slave, or cable-select. IDE CD drives can be configured as master, slave, or cable-select.
  - If cable-select is available (drive assignments will be marked on the cable), the IDE cable assigns the master/slave positions to the drives it connects. You can override these assignments using the jumpers on the drives.
  - If you are connecting two IDE drives to the cable, connect the middle cable connector to the slave drive and connect the end cable connector to the master (boot) drive.
  - If cable-select is not available and only one drive is attached to an IDE controller cable, configure the drive as master if it is a CD drive. If two drives of any type are attached to the cable, configure one as master and one as slave.
- You may need to configure the drives you install using the BIOS Setup utility. Press **F2** at startup to open the BIOS Setup utility.

# Installing a CD or diskette drive

**Important**

Drives connected to the primary and secondary IDE connectors should be ATA100 drives, and drives connected to the third IDE connector should be ATA66 drives.

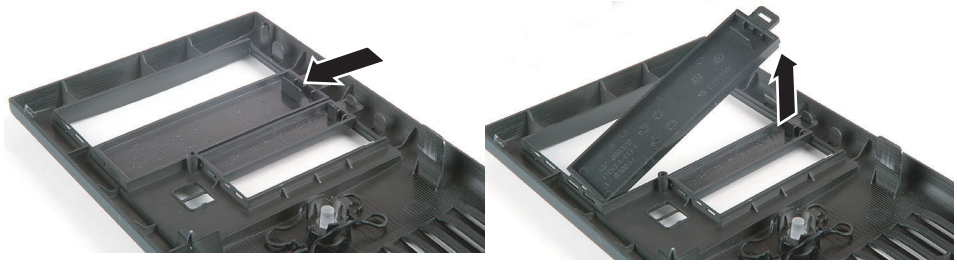
## To install a CD or diskette drive:

1. Follow the instructions in "Preventing static electricity discharge" on page 41.
2. Open the server case by following the instructions in "Opening the server case" on page 42.
3. If you are replacing a drive, go to Step 6.

   - OR -

If you are adding a new drive, press in on the two front cover release tabs, then swing the front cover away from the server.

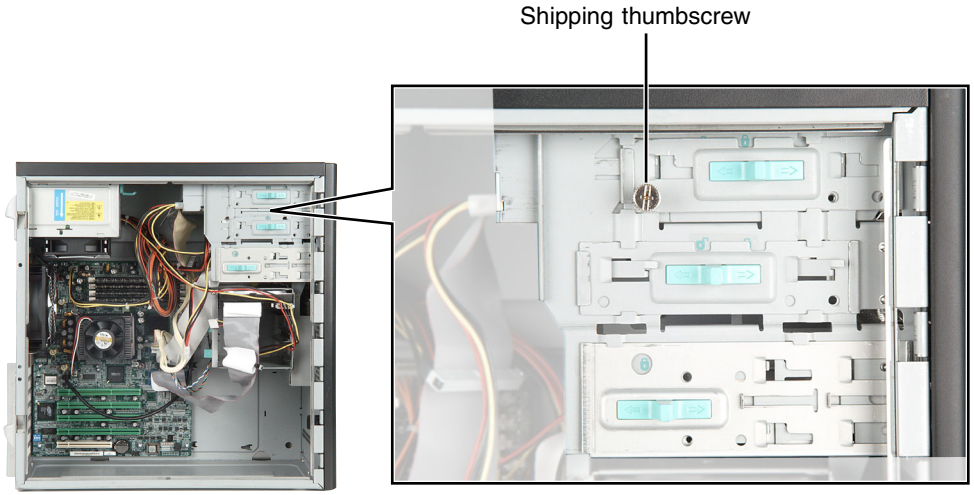
**4** Press the drive bay face plate release tab, then swing the faceplate away from the front cover.



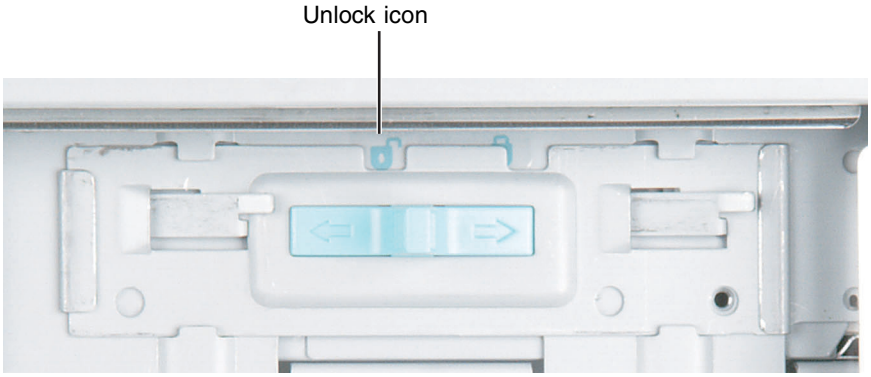
5 Remove the shield for the bay into which you are installing the new drive.

6 If you are replacing a drive, disconnect the drive cables.

7 If there is a shipping thumbscrew installed next to the drive release latch, remove the thumbscrew.



8 Slide the drive release latch back toward the rear of the case until the unlock icon is visible.

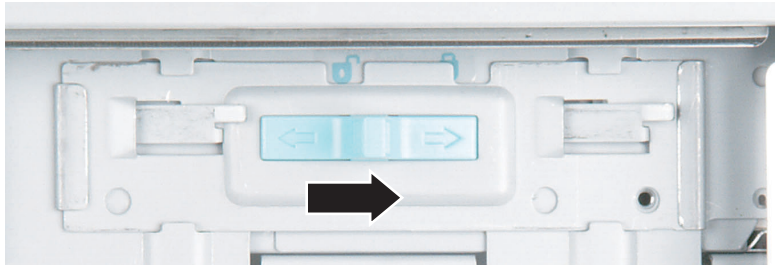


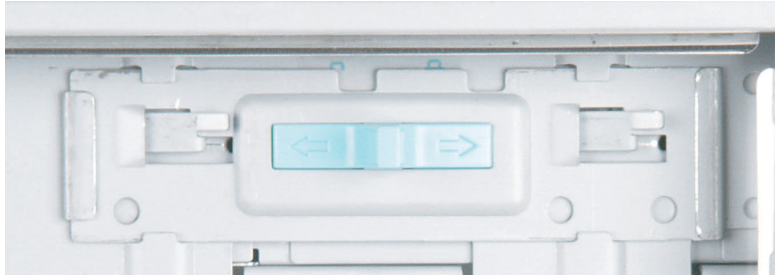

9 If you are replacing a drive, slide it forward and out of the drive bay.

10 Set any jumpers on the new drive. See the drive's documentation for further instructions.

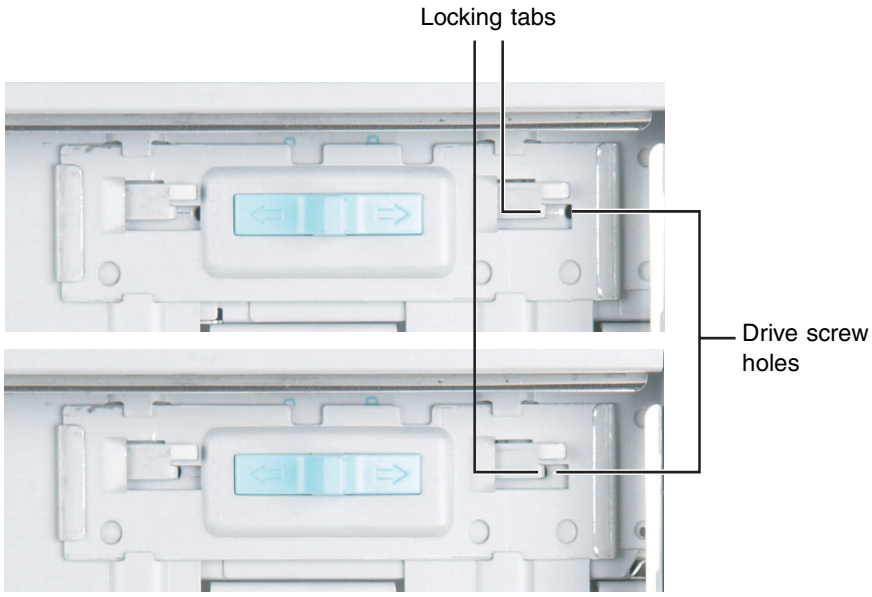
11 Slide the new drive into the drive bay.

12 Move the release latch to the right about ¼ inch (6 mm).

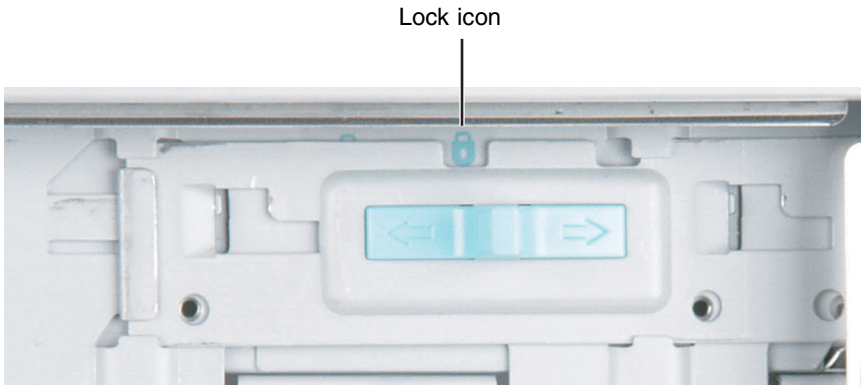




**13** Align the drive's screw holes with the release latch's locking tabs.




**14** Slide the drive release latch toward the front of the case until the lock icon is visible.




**15** Connect the drive cables by following the instructions in the drive's documentation.

16 If you removed the front cover, replace it.

17 Close the server case by following the instructions in "Closing the server case" on page 44.

# Installing a hard drive

**Important**

Drives connected to the primary and secondary IDE connectors should be ATA100 drives, and drives connected to the third IDE connector should be ATA66 drives.

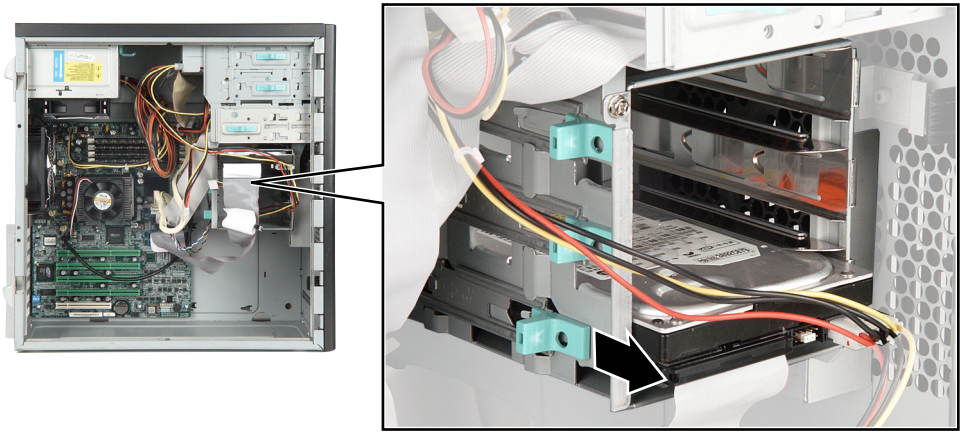
## To install a hard drive:

1 Follow the instructions in "Preventing static electricity discharge" on page 41.

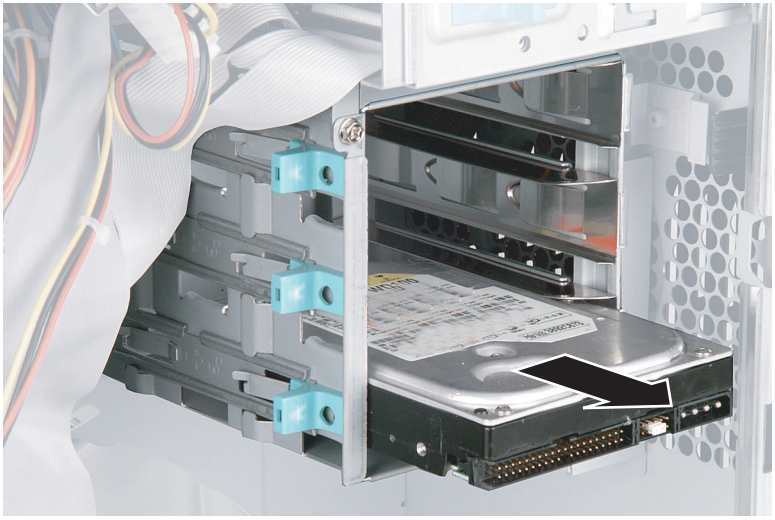
2 Open the server case by following the instructions in "Opening the server case" on page 42.

3 If you are replacing a hard drive, disconnect the old drive's cables.

4 Slide the drive release latch toward the open side of the case.

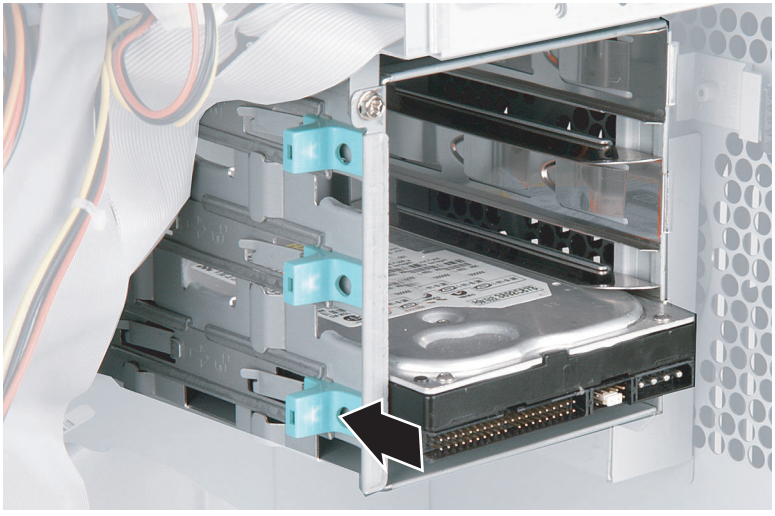


5 If you are replacing a hard drive, slide the old drive out of the drive bay.



6 Set any jumpers on the new drive. See the drive's documentation for further instructions.

7 Slide the new drive in, then slide the release latch toward the inside of the case.



8 Connect the drive cables by following the instructions in the drive's documentation.

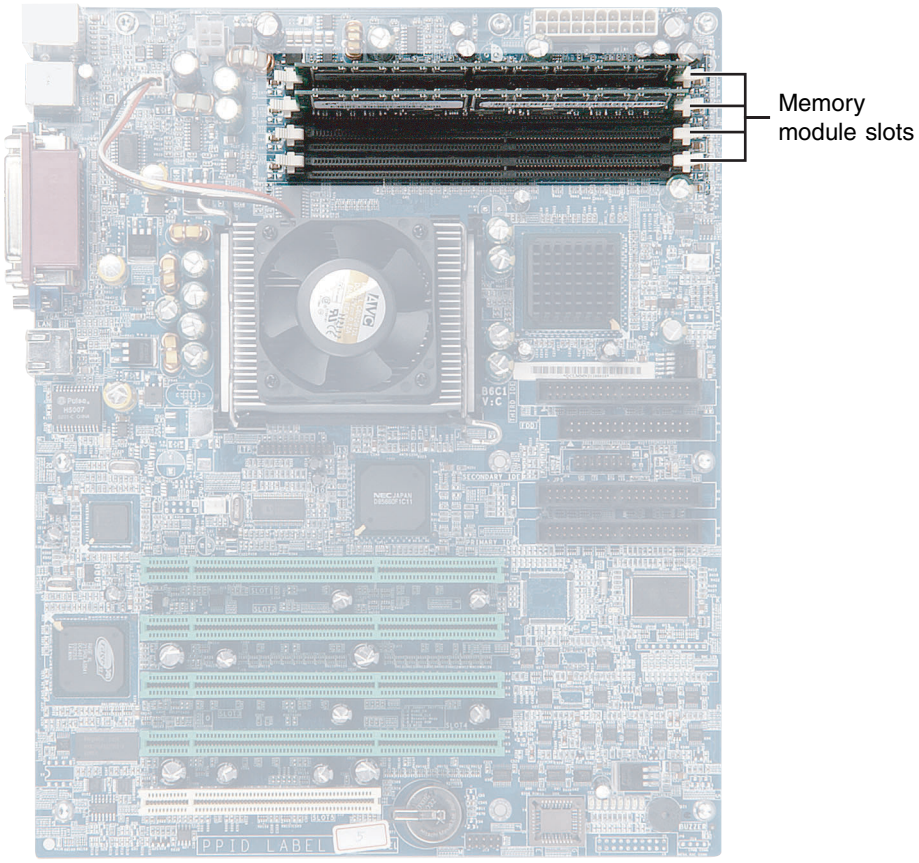
9 Close the server case by following the instructions in "Closing the server case" on page 44.

# Installing memory

When you upgrade your server memory, make sure that you install the correct type of memory module for your server. Your server uses PC2100 DDR SDRAM registered ECC DIMM memory. The following illustration shows the location of the memory modules on the system board.

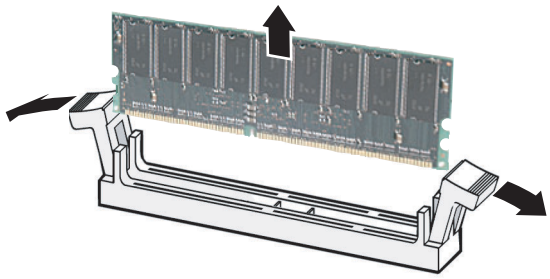
**Warning**

Use only PC2100 DDR SDRAM registered ECC DIMM memory modules.



## To install or replace memory:

1. Follow the instructions in "Preventing static electricity discharge" on page 41.
2. Open the server case by following the instructions in "Opening the server case" on page 42.
3. Pull the plastic tabs away from the sides of the memory module slot. If you are replacing a memory module, remove the old module.



4. Align the notch on the new module with the notch in the memory module slot and press the module firmly into the slot. The tabs on the sides of the memory slot should secure the memory module automatically.
5. Close the server case by following the instructions in "Closing the server case" on page 44.
6. Turn on the server. Make sure that the server turns on and that the operating system loads completely.
7. If your server is running Windows 2000 Server, right-click the **My Computer** icon, then click **Properties**. The amount of memory in your server is shown at the bottom of the *Properties* dialog.

   - OR -

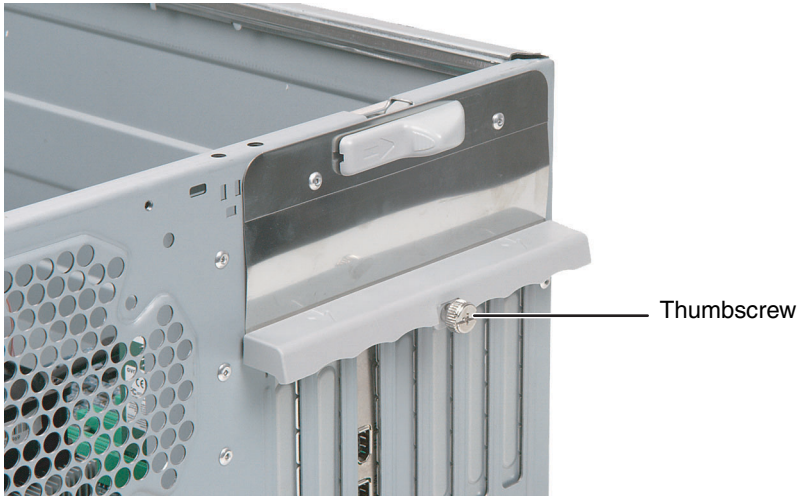
   Restart and open the BIOS Setup utility. Note the **System Memory** listed in the Main menu to verify the amount of memory installed.

# Installing PCI expansion cards

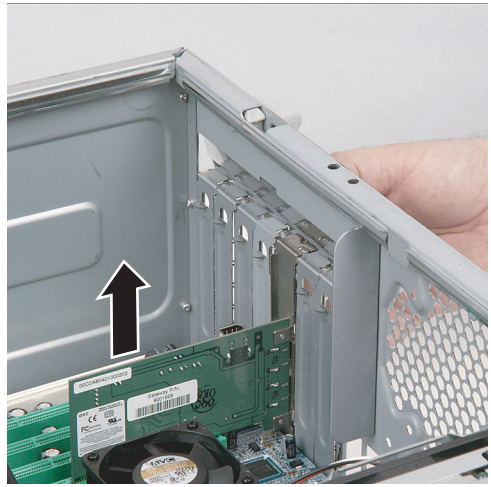
A PCI *expansion card* (sometimes called an *add-in card*) is a card used in the server to add functionality to the system. Use the following procedure to replace, add, or reseat an expansion card.

## To replace, add, or reseat a PCI expansion card:

1. Follow the instructions in "Preventing static electricity discharge" on page 41.
2. Open the server case by following the instructions in "Opening the server case" on page 42.
3. If you are replacing a card, disconnect any cables that are attached to the old card.
4. Remove the thumbscrew that secures the expansion card retention cover to the server case.



5 While holding the retention cover open, remove the expansion card. You can slightly seesaw the card end-to-end to loosen the card, but do not bend the card sideways.



**Warning**

Do not touch the contacts on the bottom part of the expansion card. Touching the contacts can cause electrostatic damage to the card.

6 While holding the retention cover open, press the new card into the expansion slot. You can slightly seesaw the card end-to-end to help insert the card, but do not bend the card sideways.

7 Push the retention cover in, then tighten the thumbscrew.

8 Connect any cables to the card by following the instructions in the card documentation.

9 Close the server case by following the instructions in "Closing the server case" on page 44.

10 See the documentation that came with the card for any special software installation instructions.

# Replacing the processor

Your server is compatible with the Intel® Pentium® 4 or Intel® Celeron® processor. The server automatically detects the processor each time you turn on the server. Whenever you install a new processor, you should first install the most current version of the BIOS. For more information, see "Updating the BIOS" on page 73.

**Warning**

A heat sink must be installed on the processor. Installing a processor without a heat sink could damage the processor.

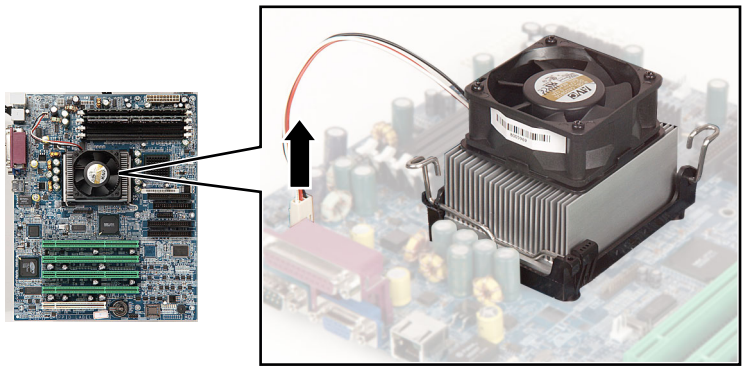
**Warning**

The processor and heat sink may be hot if the computer has been running. Also, there may be sharp edges on the heat sink. Consider wearing protective gloves.

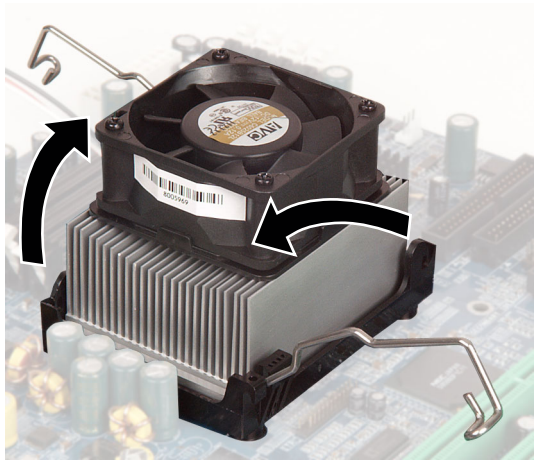
## To replace the processor:

1. Install the most current BIOS version by following the instructions in "Updating the BIOS" on page 73.
2. Follow the instructions in "Preventing static electricity discharge" on page 41.
3. Open the server case by following the instructions in "Opening the server case" on page 42.

**4** Unplug the heat sink's cooling fan from the system board.



**5** Press down on the heat sink locking levers, push them slightly away from the heat sink, then lift the levers out of the way.

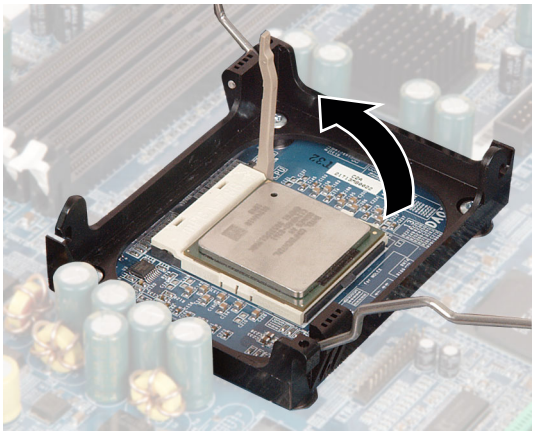


**6** Remove the heat sink.

**Important**

The heat sink mounting paste may harden over time and hold the heat sink securely to the processor. If removing the heat sink also pulls the processor out of the processor socket, the processor should still be undamaged. Rotate the processor locking lever out of the way and continue with the procedure in Step 9.

7 Press down on the processor locking lever, push it slightly away from the processor, then rotate the lever straight up to release the processor.



8 Remove the old processor.

9 Install the new processor into the system board. Make sure that the arrow on the corner of the processor aligns with Pin 1 on the processor socket (the socket corner without a pin hole).

10 Press the processor locking lever down until it clicks into place.

11 Apply thermal grease to the top of the processor, if necessary.

12 Place the heat sink on the processor, then press the heat sink locking levers down until they click into place.

13 Plug the heat sink's cooling fan into the system board.

14 Close the server case by following the instructions in "Closing the server case" on page 44.

# Replacing the power supply

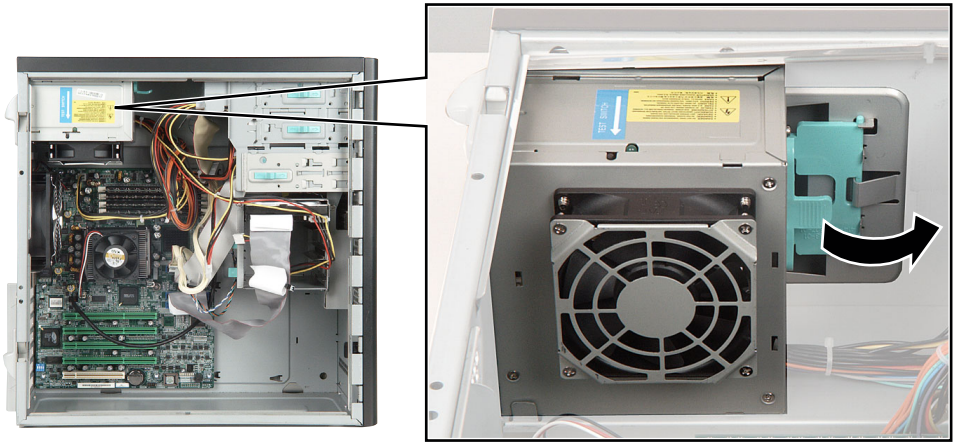
**Warning**

The power supply in this server contains no user-serviceable parts. Only a qualified computer technician should service the power supply.

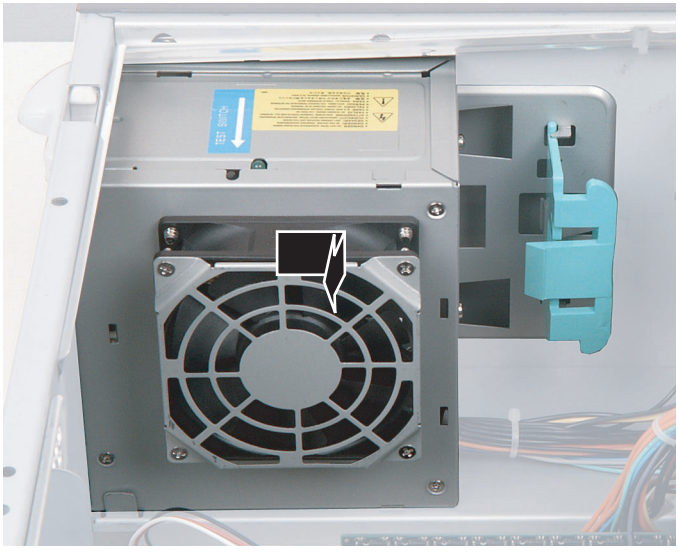
Your server is supplied with a 3-wire AC power cord fitted with the correct plug style for your region. If this plug does not match the connector on your surge protector, UPS, or wall outlet, do not attempt to modify the plug in any way. Use a surge protector, UPS, or wall outlet that is appropriate for the supplied AC power cord.

## To replace the power supply:

1. Follow the instructions in "Preventing static electricity discharge" on page 41.
2. Open the server case by following the instructions in "Opening the server case" on page 42.
3. Disconnect the power supply cables from all components, noting their locations and orientation. (You will reconnect the cables after you install the new power supply.)
4. Pull the power supply retention clip away from the power supply.



5 While supporting the power supply with your hand, slide the power supply toward the front of the case, then out toward the bottom of the case.



6 Install the new power supply, then press the retention clip back against the case.

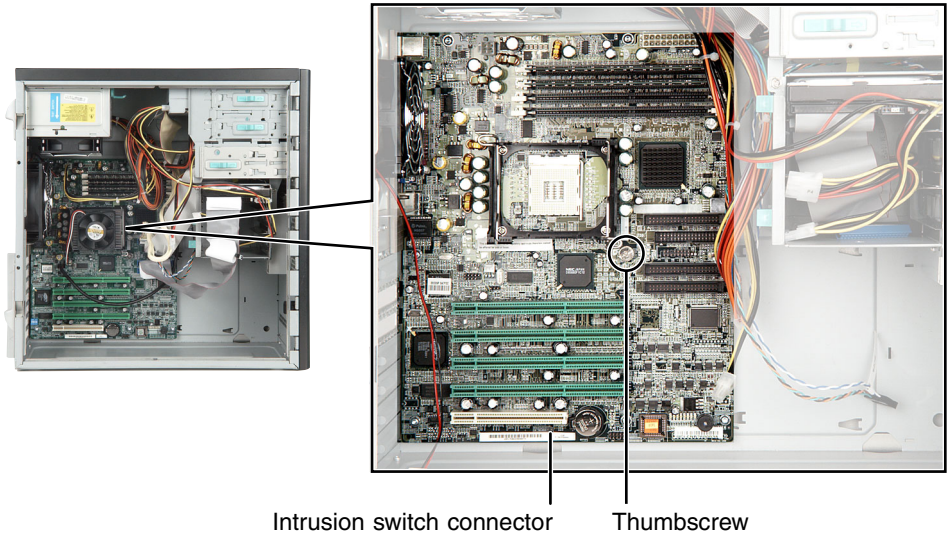
7 Reconnect the power supply cables.

8 Close the server case by following the instructions in "Closing the server case" on page 44.

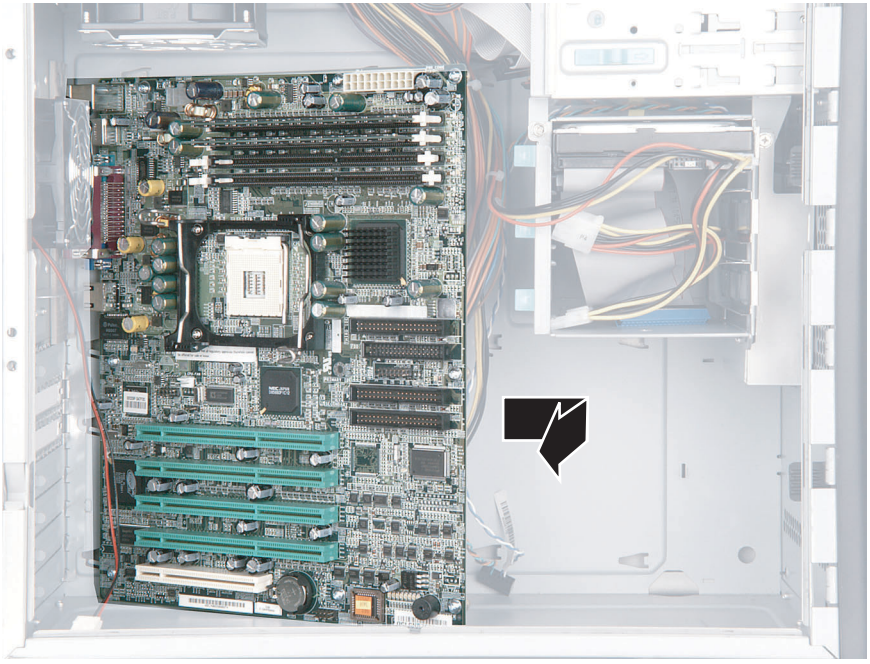
# Replacing the system board

## To replace the system board:

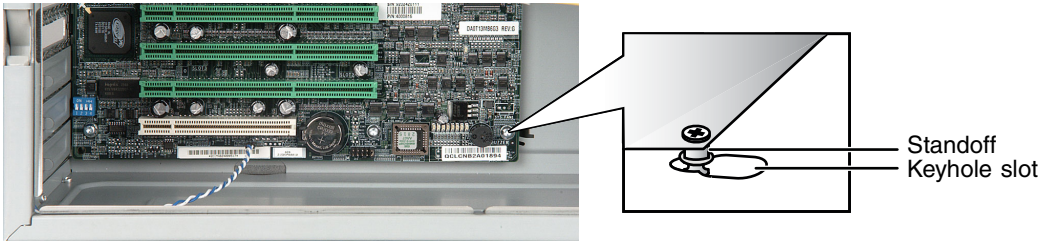
1. Follow the instructions in "Preventing static electricity discharge" on page 41.
2. Open the server case by following the instructions in "Opening the server case" on page 42.
3. Remove all of the expansion cards by following the instructions in "Installing PCI expansion cards" on page 56.
4. Unplug the heat sink's cooling fan, then remove the heat sink and processor by following the instructions in "Replacing the processor" on page 58.
5. Remove the memory modules by following the instructions in "Installing memory" on page 54.
6. Disconnect the power and data cables from the system board, noting their locations and orientation. (You will reconnect the cables after you install the new board.) Make sure that you disconnect the intrusion switch cable.
7. Remove the system board's thumbscrew.



**8** Slide the system board toward the front of the case, then lift it away from the case.



**9** Slide the new system board's standoffs into the keyhole slots, then slide the board toward the back of the case.




**Important**

The new system board must have special standoffs (*pem studs*) mounted on the bottom of the board. If necessary, use the standoffs from the original system board.

**10** Lock the system board into place with the thumbscrew.

11 Install the memory, processor, and heat sink, then reconnect the heat sink cooling fan to the system board.

12 Connect the power and data cables.

13 Install the expansion cards by following the instructions in "Installing PCI expansion cards" on page 56.

14 Close the server case by following the instructions in "Closing the server case" on page 44.

15 Turn on your server.

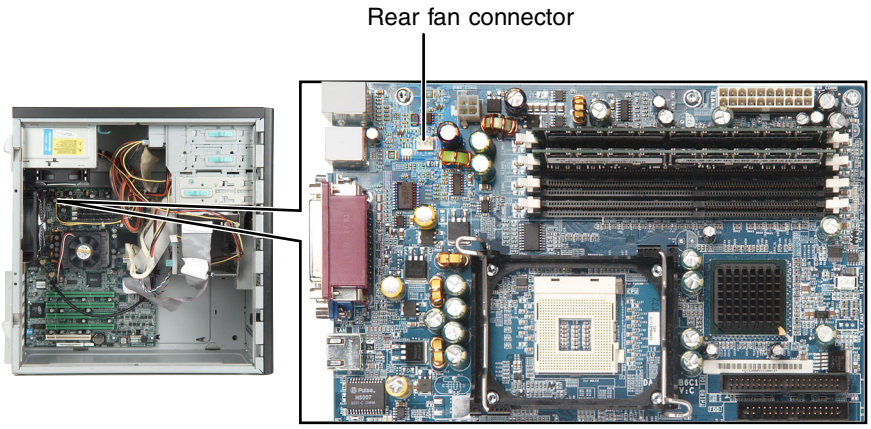
16 Press **F2** when the Gateway logo screen appears during startup. The BIOS Setup utility opens.

17 Check BIOS settings to make sure that they detect the server's new hardware, then save your changes (if any) and close the BIOS Setup utility.

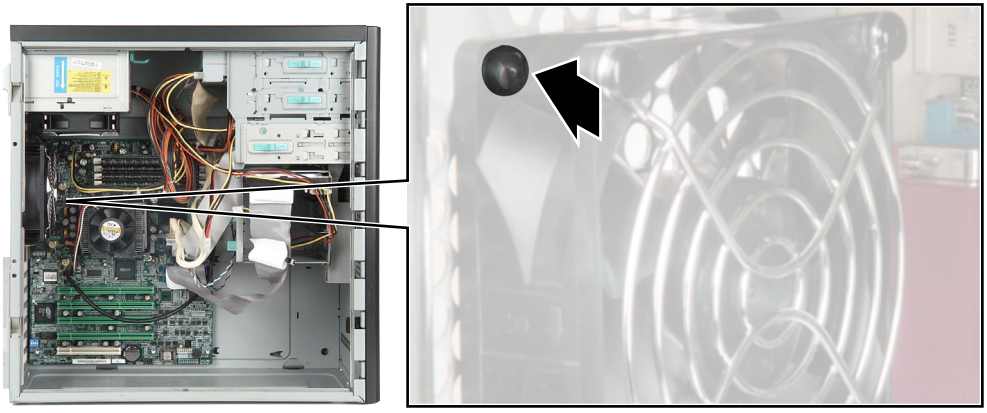
# Replacing the case fan

## To replace the case fan:

1. Follow the instructions in "Preventing static electricity discharge" on page 41.
2. Open the server case by following the instructions in "Opening the server case" on page 42.
3. Unplug the case fan from the system board.

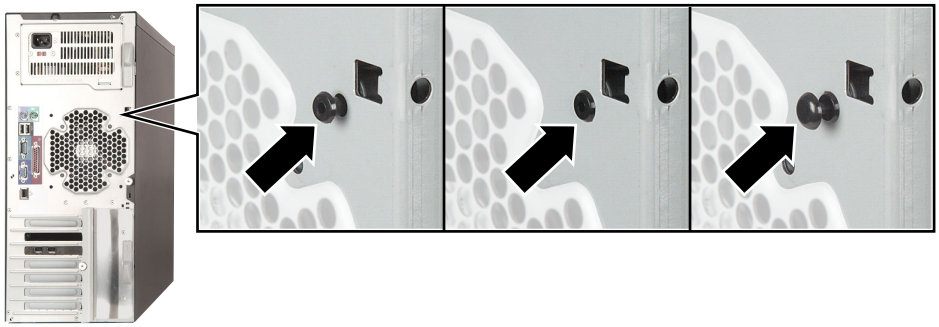



4. Use a narrow tool, such as a small screwdriver, to push each of the four fan mounting rivets and sleeves out toward the back of the case.



5 Remove each rivet, then remove the old fan.

6 Hold the new fan in place while you push the fan's rivet sleeves into the fan from the outside of the case, then push the rivets into the sleeves.



7 Reconnect the case fan to the system board.

8 Close the server case by following the instructions in "Closing the server case" on page 44.

# Replacing the CMOS battery

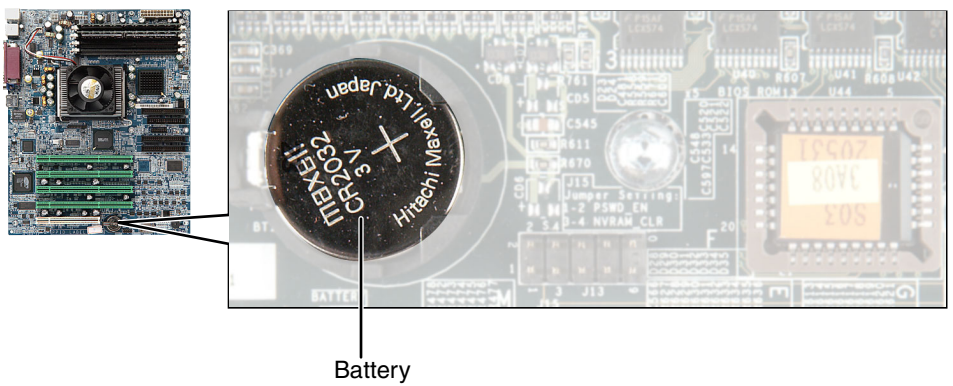
If the server clock does not keep time or the settings in the BIOS Setup utility are not saved when you turn off the server, replace the CMOS battery with an equivalent battery.

**Warning**

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries following the manufacturer's instructions.

## To replace the battery:

1. Print the appendix for BIOS Settings in this guide.
2. Open the BIOS Setup utility by following the instructions in "Opening the BIOS Setup utility" on page 72.
3. Record the BIOS settings on your printout, then exit from the utility. For more information, see "Recording your BIOS configuration" on page 35.
4. Turn off your server, then follow the instructions in "Preventing static electricity discharge" on page 41.
5. Open the server case by following the instructions in "Opening the server case" on page 42.
6. Locate the old battery on the system board and note its orientation. You will need to install the new battery the same way.



7 Place the edge of a small flat-head screwdriver under the battery and lift the battery up until it comes out of the socket.

8 Make sure that the positive (+) side of the new battery is facing up, then press the new battery into the socket until it snaps into place.

9 Close the server case by following the instructions in "Closing the server case" on page 44.

10 Turn on the server.

11 When the Gateway Logo screen appears, press **F2** to open the BIOS Setup utility.

12 Restore any BIOS settings that you wrote down in Step 3.

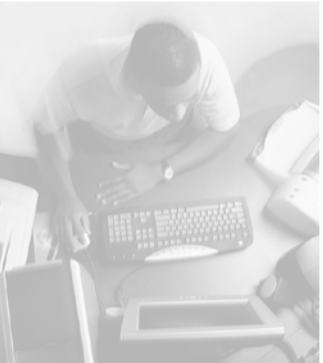
13 Save all your settings and close the BIOS Setup utility.

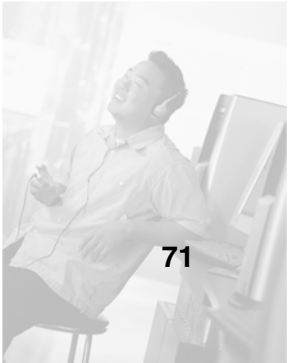
# 5

# Using the BIOS Setup Utility

Read this chapter to learn how to:

- Open the BIOS Setup utility
- Update the BIOS
- Reset the BIOS settings to their factory defaults
- Bypass the BIOS passwords





# Opening the BIOS Setup utility

The BIOS Setup utility stores basic settings for your server. These settings include basic hardware configuration, resource settings, and password security. These settings are stored and saved even when the power is off.

**Caution**

The options in the BIOS Setup utility have been set at the factory for optimal performance. Changes to these settings will affect the performance of your server.

Before changing any settings, write them down in case you need to restore them later. You can record the settings on a printout of the appendix for "BIOS Settings" on page 123.

## To open the BIOS Setup utility:

1. Restart your server, then press **F2** when the Gateway logo screen appears during startup. The BIOS Setup utility opens.

   When you select menu items, the Item Specific Help box on the right side of the screen displays specific information about the selection. The command bar across the bottom of the screen shows the keys you press to access help, navigate through the menus, and perform other tasks.

2. Select one of these menus:

   - **Main** gives you access to basic information and settings related to your server's hardware and configuration.
   - **Advanced** gives you access to information and settings for system resources, hardware, and server's configuration.
   - **Power** gives you access to settings that control your server's power management features.
   - **Boot** lets you change startup settings.
   - **Security** gives you access to settings related to system access passwords. For more information, see "Server security" on page 36.
   - **Exit** gives you access to options for closing the BIOS Setup utility.

# Updating the BIOS

If you need a new version of the BIOS, you can download the BIOS update from Gateway, then install the new version from a diskette.

### To update the BIOS:

1. Print the appendix for BIOS Settings in this guide.
2. Download the BIOS update from support.gateway.com.
3. Restart your server, then press **F2** when the Gateway logo screen appears during startup.
4. Record any custom BIOS settings on your printout.
5. Follow the instructions in the self-extracting BIOS update file.
6. Enter any custom BIOS settings you recorded in Step 4, then save your changes and close the BIOS Setup utility.

## Recovering the BIOS

If you encounter a problem while you are updating the BIOS, such as a power outage, the BIOS update may not be successful. You can try to recover the BIOS by setting a system board jumper.

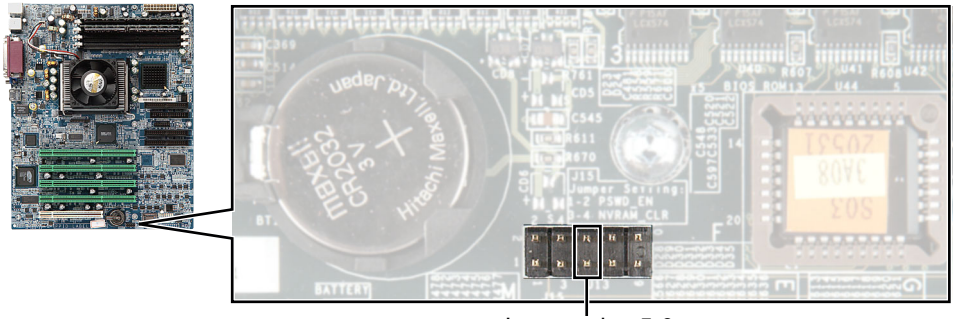
### To recover the BIOS:

1. Follow the instructions in "Preventing static electricity discharge" on page 41.
2. Turn off the server, then disconnect the power cord and all other cables connected to the server.
3. Remove the side panel. For more information, see "Opening the server case" on page 42.

**Warning**

Moving the jumper while the power is on can damage your server. Always turn off the server and unplug the power cord and all other cables before changing the jumper.

4 Place the jumper across pins 5-6 of jumper J13.




5 Close the case, then reconnect the power cord, monitor, and keyboard. For more information, see "Closing the server case" on page 44.

6 Place the startup diskette containing the BIOS files into drive A:.

7 Turn on the server. At the start of the BIOS recovery process, the server beeps once. The recovery process may take a few minutes.

8 When prompted, remove the diskette and turn off the server.

9 Disconnect the power cord and remove the side panel again. Remove the jumper from pins 5-6 of jumper J13, and place it over just one of the pins for storage.

10 Close the case, reconnect the power cord and all other cables, then turn on the server.

11 When the Gateway Logo screen appears, press **F2** to open the BIOS Setup utility.

12 In the BIOS Setup utility, go to the appropriate menus and select any BIOS fields you want to change. Make sure that the date and time are correct.

13 Save your changes, then close the BIOS Setup utility.

# Resetting the BIOS

The Reset BIOS jumper on the system board lets you return all BIOS settings to the factory defaults.

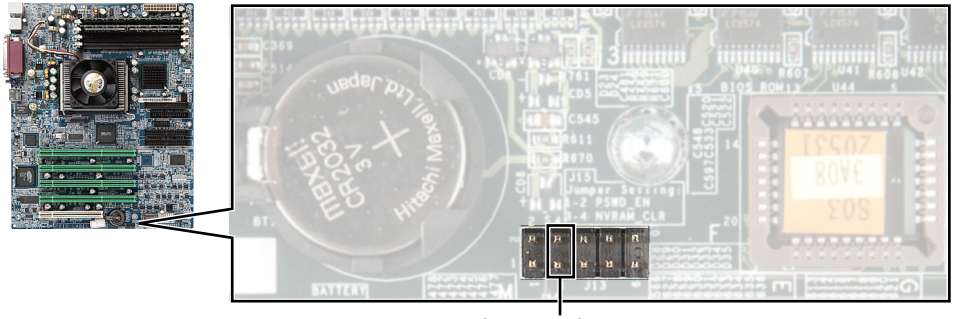
## To reset the BIOS:

1. Print the appendix for BIOS Settings in this guide.
2. Restart your server, then press **F2** when the Gateway logo screen appears during startup. The BIOS Setup utility opens.
3. Record any custom BIOS settings on your printout.
4. Follow the instructions in "Preventing static electricity discharge" on page 41.
5. Turn off the server, then disconnect the power cord and all other cables connected to the server.
6. Remove the side panel. For more information, see "Opening the server case" on page 42.

**Warning**

Moving the jumper while the power is on can damage your server. Always turn off the server and unplug the power cord and all other cables before changing the jumper.

7. Place the jumper across pins 3-4 of jumper J13.



8 Close the case, then reconnect the power cord, monitor, and keyboard. For more information, see "Closing the server case" on page 44.

9 Turn on the server. A message appears saying that the CMOS Checksum is bad, which means the BIOS has been cleared successfully.

10 Press **F2** to load the default BIOS values and open the BIOS Setup utility. All BIOS settings return to factory defaults, and all BIOS passwords are erased.

11 Turn off the server, disconnect the power cord, and remove the side panel again.

12 Remove the jumper from pins 3-4 of jumper J13 and place it over just one of the pins for storage.

13 Close the case, reconnect the cords, then turn on the server.

# Bypassing the BIOS passwords

The Bypass Password jumper on the system board lets you bypass the BIOS passwords.

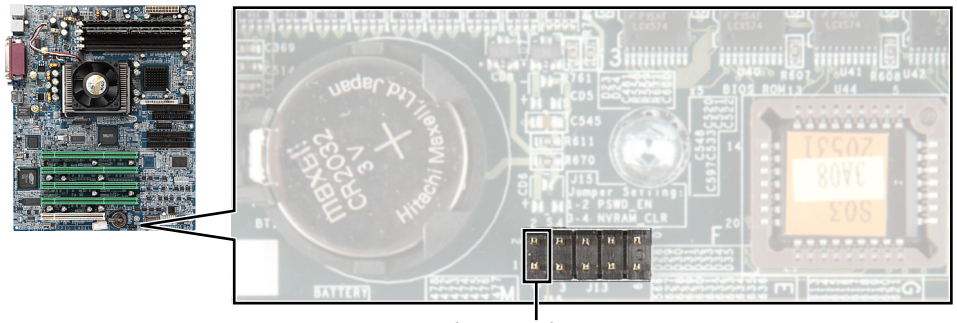
## To bypass the BIOS passwords:

1. Follow the instructions in "Preventing static electricity discharge" on page 41.
2. Turn off the server, then disconnect the power cord and all other cables connected to the server.
3. Remove the side panel. For more information, see "Opening the server case" on page 42.

**Warning**

Moving the jumper while the power is on can damage your server. Always turn off the server and unplug the power cord and all other cables before changing the jumper.

4. Place the jumper across pins 1-2 of jumper J13.




5. Close the case, then reconnect the power cord, monitor, and keyboard. For more information, see "Closing the server case" on page 44.

6 Turn on the server. You can now open the BIOS Setup utility or perform other server tasks.

   If you want to change the passwords, press **F2** when the Gateway logo screen appears. When the BIOS Setup utility opens, you can clear or change the passwords, or change other BIOS settings.

7 Turn off the server, disconnect the power cord, and remove the side panel again.

8 Remove the jumper from pins 1-2 of jumper J13 and place it over just one of the pins for storage.

9 Close the case, reconnect the cords, then turn on the server.

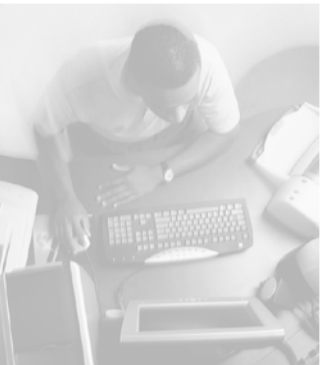
# 6

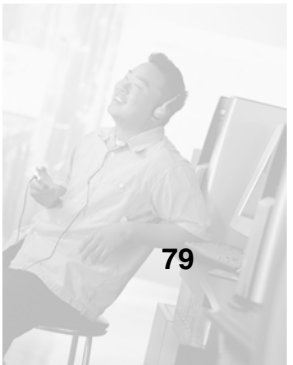
# Troubleshooting

Read this chapter to learn how to:

- Interpret error messages and codes
- Troubleshoot
- Get telephone support and training

If the suggestions in this chapter do not correct the problem, see "Telephone support" on page 103 for more information about how to get help.





# Safety guidelines

While troubleshooting your server, follow these safety guidelines:

- Never remove the side panel while your server is turned on and while the modem cable, network cable, and the power cord are connected.
- Do not attempt to open the monitor. To do so is extremely dangerous. Even if the power is disconnected, energy stored in the monitor components can be dangerous. Also, opening the monitor voids the warranty.
- Make sure that you are grounded correctly before opening the server case. For more information about preventing damage from static electricity, see "Preventing static electricity discharge" on page 41.
- After you complete any maintenance task where you have to open the server case, make sure that you close the case, reinstall any screws, then reconnect all cables before you restart your server.

**Warning**

To avoid bodily injury, do not attempt to troubleshoot your server problem if:

- Power cords or plugs are damaged
- Liquid has been spilled into your server
- Your server was dropped
- The case was damaged

Instead, unplug your server and contact a qualified computer technician. If your server was damaged during shipment from Gateway, contact Gateway Technical Support.

# Error messages

These messages often indicate procedural errors such as typing an incorrect keystroke or trying to save a file to a write-protected diskette. Some messages, however, may indicate a problem that requires further troubleshooting.

### Access denied

- Your diskette is write-protected. Move the write-protection tab over the window on the back of the diskette, or save to a new diskette.

### Bad command or file name

- Make sure that you entered the right command.
- Make sure that the specified drive is correct, then try again.
- If you are trying to exit MS-DOS to return to Windows, type **exit**, then press ENTER.

### Base memory [xxx] expansion

- This is an informational message only. No action is required.

### CD drive is not recognized

- See "Your server does not recognize a CD or the CD drive" on page 88 for a possible solution.

### Data error

- In Windows 2000 Server, run CheckDisk on the drive with the error.

### Diskette drive 0 seek to track 0 failed

- Open the BIOS Setup utility, then make sure that the drive settings are correct.
- Check the diskette drive cables. Make sure that Pin 1 on the cable aligns with Pin 1 on the connector.

### Diskette drive reset failed

- Open the BIOS Setup utility, then make sure that the drive settings are correct.
- Check the diskette drive cables. Make sure that Pin 1 on the cable aligns with Pin 1 on the connector.

### Diskette read failed - press F1 to retry boot

- Make sure that the startup diskette contains the **command.com** file.
- Open the BIOS Setup utility, then make sure that your drive or controller is configured correctly.
- Press **F1** to restart the server.
- Make sure that the diskette drive cable is connected securely.

### Error loading operating system

- The master boot record may be corrupt. For troubleshooting information, see "The master boot record is corrupted" on page 92.

### Hard disk controller failure

- Make sure that the hard drive cable is connected securely.
- Open the BIOS Setup utility, then make sure that the correct drive type is selected.

### Hard disk controller failure - press F1 to try reboot

- The drive controller may be defective. Press **F1** to try to restart the server. Try running FDISK and DOS Format to check the integrity of the hard drive. For more information, see your operating system's documentation.
- See "You need to troubleshoot an IDE hard drive" on page 93.

### Insert bootable media device

- Make sure that the correct hard drive is set as the first bootable drive in the Boot menu of the BIOS Setup utility.
- See "Your server does not recognize an IDE drive" on page 92 or "Your server does not recognize a SCSI drive" on page 92 for a possible solution.

### Insufficient disk space

- Check the free space on the drive. If the drive is almost full, remove unnecessary files. For more information, see "Using Disk Cleanup" on page 24.

### Invalid configuration information

- Open the BIOS Setup utility, then make sure that the settings are correct.
- See "Resetting the BIOS" on page 75 for a possible solution.

### Invalid partition table

- The master boot record may be corrupt. For troubleshooting information, see "The master boot record is corrupted" on page 92.

### Invalid password

- Enter your password again. Some passwords are case sensitive.
- If you do not know the password, you may need to reinstall the software you are trying to access.
- Startup passwords are stored in BIOS. If this password has been set and you do not know it, you may be able to bypass the password through system board jumper settings. For more information, see "Bypassing the BIOS passwords" on page 77.

### Keyboard not detected

- See "The keyboard does not work" on page 94 for a possible solution.
- Turn off the server, then check the keyboard cable.

### Keyboard stuck key failure

- Remove any objects that may be resting on the keyboard, then restart the server.
- Make sure that a key is not stuck. Clean the keyboard if necessary.

### Memory errors were detected while the system started up

- See "Memory errors were detected during server start up" on page 95 for a possible solution.

### Memory size error

- Open the BIOS Setup utility, then save the memory configuration.

### Missing operating system

- The master boot record may be corrupt. For troubleshooting information, see "The master boot record is corrupted" on page 92.
- Use FDISK to make sure that your hard drive has an active partition. On FDISK's main menu, select the Set Active Partition option. In MS-DOS or Windows 95, the only partition that can be set as active is the primary DOS partition.

### Non-system disk or disk error

- Eject the diskette, then press ENTER.
- If the diskette is bootable, check it for errors with an error-checking program.
- For troubleshooting information, see "You need to troubleshoot an IDE hard drive" on page 93.

### Not enough memory

- Close all programs that are not currently in use.

### Required parameter missing

- Make sure that you entered the right command.
- If you are trying to exit DOS to return to Windows, type **exit**, then press ENTER.

### Syntax error

- Make sure that you entered the right command. If you are trying to exit DOS to return to Windows, type **exit**, then press ENTER.

### System Event Log Full

- Clear the event log. To clear or view the event log, open the BIOS Setup utility, select the **Advanced** menu, then select the **Event Log Control** menu. For information on opening the BIOS Setup utility, see "Opening the BIOS Setup utility" on page 72.

### Time and date not set

- Open the BIOS Setup utility, then set the server date and time.

### Write-protect error

- Your diskette is write-protected. Move the write-protection tab over the window on the back of the diskette.

# Troubleshooting

## First steps

Try these steps first before going to the following sections:

- Make sure that the power cable is connected to your server and an AC outlet and that the AC outlet is supplying power.
- If you use a surge protector or a UPS, make sure that it is turned on and is rated to handle the power required by your server.
- If a peripheral device, such as the keyboard or mouse, does not work, make sure that all connections are secure and plugged into the correct ports.
- If you added or removed server components before the problem started, review the installation procedures you performed and make sure that you followed each instruction. You may need to remove the device, uninstall the device's software, then reinstall the device.
- Make sure that your hard drive is not full. For more information, see "Managing hard drive space" on page 23.
- If an error message appears on the screen, write down the exact message. The message may help Gateway Technical Support in diagnosing and fixing the problem.
- Open the BIOS Setup utility and check your configuration settings. For more information, see "Opening the BIOS Setup utility" on page 72.
- View the system event log. To view the log, in the BIOS Setup utility select the **Advanced** menu, then **Event Log Configuration**, then **Event Log Area**.
- If an error occurs in a program, see its documentation or the online help.

**Warning**

To avoid bodily injury, do not attempt to troubleshoot your server problem if:

- Power cords or plugs are damaged
- Liquid has been spilled into your server
- Your server was dropped
- The case was damaged

Instead, unplug your server and contact a qualified computer technician.

# Battery replacement

If you have problems after installing a new CMOS battery, try each of the following items, restarting the server after each try:

- Turn off the server and make sure that all exterior cables are attached and secured to the correct connectors.
- Make sure that all power switches are on. If the server is plugged into a surge protector or UPS, make sure that it is turned on.
- Open the BIOS Setup utility and compare the settings on the screen with your notes, then correct any discrepancies.
- Remove the side panel by following the instructions in "Opening the server case" on page 42, then make sure that all cables inside the case are attached securely. Also, make sure that the colored cable edges are aligned correctly and that the connectors do not miss any pins. Close the case.

**Warning**

To avoid bodily injury, do not attempt to troubleshoot your server problem if:

- Power cords or plugs are damaged
- Liquid has been spilled into your server
- Your server was dropped
- The case was damaged

Instead, unplug your server and contact a qualified computer technician.

- If you have the correct test equipment, make sure that the new battery has power. Although unlikely, your new battery may be defective.

# Beep codes

Whenever a recoverable error occurs during the power-on self-test (POST), the BIOS displays an error message that describes the problem. The BIOS also sounds a beep code (one long tone followed by two short tones) during POST if the video configuration fails (a faulty video controller) or if an expansion card is not functioning correctly.

An PCI expansion card (for example, a RAID controller) can also issue audible errors by itself, usually consisting of one long tone followed by a series of short tones. For more information on the beep codes issued, check the documentation for that device.

Several POST routines issue a POST terminal error and shut down the system when they fail. Before shutting down the system, the terminal error handler sounds a beep code (one long tone and a series of short tones) that identifies the test point error. If POST completes normally, the BIOS issues one short beep before passing control to the operating system.

| Beeps | Description | Troubleshooting steps |
|---|---|---|
| 1 | Refresh failure. The memory refresh circuitry on the system board is faulty. | Reseat the memory or replace with known good modules. |
| 2 | Parity error. Parity error in the first 64 KB of memory. | Same as for 1 beep. |
| 3 | Base 64 KB memory failure. Memory failure in first 64 KB. | Same as for 1 beep. |
| 4 | Memory failure in first 64 KB of memory, or Timer 1 on the system board not functioning. | Remove all expansion cards.<br>▪ If the beep codes occur even when all expansion cards have been removed, the system board is at fault.<br>▪ If the beep codes do not occur when the expansion cards have been removed, one of the cards is causing the problem. Install the cards one at a time until the problem happens again. When the beep codes return, the most recent card you installed is at fault. |
| 5 | The processor on the system board generated an error. | Same as for 4 beeps. |
| 6 | The keyboard controller (8042) may be defective. The BIOS cannot switch to Protected mode. | Same as for 4 beeps. |
| 7 | The processor generated an exception interrupt. | Same as for 4 beeps. |
| 8 | The server video adapter is either missing or its memory is faulty. This is not a fatal error. | Check or replace the video adapter. |
| 9 | The ROM checksum value does not match the value encoded in the BIOS. | Same as for 4 beeps. |

| Beeps | Description | Troubleshooting steps |
|---|---|---|
| 10 | The shutdown register for CMOS RAM failed. | Same as for 4 beeps. |
| 11 | The external cache is faulty. | Same as for 4 beeps. |

# BIOS

### The settings in the BIOS Setup utility are not retained

- Replace the CMOS battery. For more information, see "Replacing the CMOS battery" on page 68.

# CD drive

### Your server does not recognize a CD or the CD drive

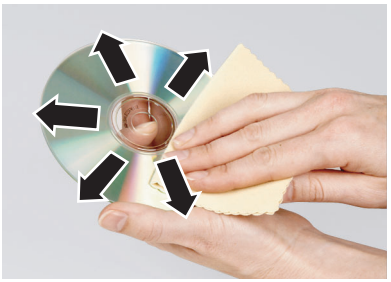
- Make sure that the CD label is facing up, then try again.
- Try a different CD. Occasionally CDs are flawed or become scratched and cannot be read by the CD drive.
- Shut down and restart your server.
- Clean the CD. For more information, see "Cleaning CDs" on page 89.
- Restart your server, then open the BIOS Setup utility by pressing and holding **F2** while your server restarts. Make sure that the IDE controllers are enabled. For more information, see "Using the BIOS Setup Utility" on page 71.
- Follow the instructions in the drive's documentation to make sure that the drive is configured correctly.
- Open your server case and make sure that the cables are connected correctly to the CD drive and the IDE connector on the system board or controller card.
- If you have a SCSI device in your system, check the cable connected to the SCSI card. If the CD drive is the last drive on the cable (the drive farthest from the card), make sure that the CD drive is terminated. For more information about SCSI device configurations, see the drive's documentation.
- Reinstall the device driver. For more information, see *Using Your Server Companion CD*.

### Your CD drive tray does not open

- Press a straightened paper clip into the CD drive's manual eject hole. The drive tray opens.
- If this problem happens frequently while the server is turned on, the drive may be defective.

## Cleaning CDs

Clean CDs by wiping from the center to the edge, not around in a circle, using a product, such as a soft cloth, made especially for cleaning CDs.



## Diskette drive

### The diskette drive is not recognized

- Restart your server.
- Open your server case and make sure that the cables are connected correctly to the diskette drive and the system board. The red-striped edge of the data ribbon cable indicates Pin 1 and corresponds with Pin 1 on the diskette drive (typically on the side farthest from the power supply connection). If necessary, reverse one end of the cable so the red-striped edge of the data ribbon cable faces Pin 1 on the diskette drive. Make sure that the pins are not bent or misaligned. For more information, see "Installing a CD or diskette drive" on page 46.

### You cannot save a file to diskette or you get the message "disk is full or write-protected"

- Your diskette is write-protected. Move the write-protection tab over the window on the back of the diskette, or save to a new diskette.

- Make sure that the diskette is formatted.
- Delete unnecessary files on the diskette and try again.
- Try a different diskette. Occasionally diskettes are flawed and cannot be read by the diskette drive.
- Run error-checking on the diskette. For more information, see "Checking the hard drive for errors" on page 24. If errors are detected and corrected, try using the diskette again.

### The diskette drive LED is lit continuously

- Remove the diskette from the drive. If the light stays on, try restarting your server.
- Open your server and make sure that the cables are connected correctly to the diskette drive and the system board. The red-striped edge of the data ribbon cable indicates Pin 1 and corresponds with Pin 1 on the diskette drive (typically on the side farthest from the power supply connection). If necessary, reverse one end of the cable so the red-striped edge of the data ribbon cable faces Pin 1 on the diskette drive. Make sure that the pins are not bent or misaligned. For more information, see "Installing a CD or diskette drive" on page 46.

# Expansion cards

### Your server does not recognize an expansion card

- Restart your server.
- Make sure that you have installed the necessary software or driver. For more information, see the card's documentation.
- Reseat the card. For more information, see "Installing PCI expansion cards" on page 56.
- Install the card in a different slot.

# File management

### A file was accidentally deleted

If the file was deleted at a DOS prompt or if you deleted a file in Windows 2000 Server while holding down the SHIFT key, the file cannot be restored.

### To restore files that were deleted in Windows 2000 Server:

1 Double-click the **Recycle Bin** icon.

2 Right-click the file you want to restore, then click **Restore**.

# Hard drive

### You receive an "Insufficient disk space" error message

- In Windows 2000 Server, delete unnecessary files from the disk using Disk Cleanup. For more information, see "Using Disk Cleanup" on page 24.
- In Windows 2000 Server, empty the Recycle Bin by right-clicking the **Recycle Bin** icon, then clicking **Empty Recycle Bin**.
- Save your files to a diskette or another drive. If the hard drive is full, copy any files not regularly used to diskettes or other backup media, then delete them from the hard drive.

### The hard drive cannot be accessed, or you receive a "General failure reading drive C" error message

- If a diskette is in the diskette drive, eject it and restart your server.
- Try restarting your server by pressing CTRL+ALT+DEL.
- Open your server and make sure that the cables are connected correctly to the hard drive and the system board. For more information, see "Installing a hard drive" on page 51.
- If your server has been subjected to static electricity or physical shock, you may need to reinstall the operating system.
- Use GWScan to test the hard drive. For more information, see "You need to troubleshoot an IDE hard drive" on page 93.

### You receive a "Non-system disk" or "disk error" error message

- Eject the diskette from the diskette drive, then press ENTER.
- Make sure that your hard drive has an active partition by using FDISK. For more information, see "The master boot record is corrupted" on page 92.

### Your server does not recognize an IDE drive

- Make sure that the IDE connectors are enabled in the BIOS Setup utility. To enter the BIOS Setup utility, restart your server, then press and hold **F2** while your server restarts. For more information, see "Using the BIOS Setup Utility" on page 71.
- Reinstall the device driver. For more information, see *Using Your Server Companion CD*.
- Open your server and make sure that the IDE cable is connected to both the system board IDE connector and the hard drive connector. For more information, see "Installing drives" on page 45.
- Use GWScan to test the hard drive. For more information, see "You need to troubleshoot an IDE hard drive" on page 93.

### Your server does not recognize a SCSI drive

- Reinstall the device driver. For more information, see *Using Your Server Companion CD*.
- Open your server and reseat the drive controller card. Also make sure that the controller card and power cables are connected to the drive. For more information, see your controller card's documentation.
- Make sure that the power cable and SCSI cable are attached securely to the drive.
- Use a different SCSI cable.
- Make sure that the last device on the SCSI cable is correctly terminated. For more information about SCSI device configurations, see the device's documentation.
- Change the drive's SCSI address to one that is not being used by your server. For more information about SCSI device configurations, see your drive's documentation.
- Make sure the SCSI controller is enabled in the BIOS Setup utility.
- Run SCSI Verify in the SCSI BIOS. For more information about the SCSI BIOS, see the SCSI controller's documentation.

### The master boot record is corrupted

- Repair the master boot record using FDISK from MS-DOS version 5.0 or later. To prepare a DOS startup diskette, see "Creating startup diskettes" on page 32.

### To repair the master boot record:

- At a DOS command prompt, type **fdisk/mbr**, then press ENTER.

#### You need to troubleshoot an IDE hard drive

- Use the GWScan utility to test a hard drive's ability to read data and to measure seek times and transfer rates. GWScan can also repair some errors that may develop on IDE hard drives.

### To download the GWScan utility:

- Search for the utility at support.gateway.com. For information about how to use GWScan, go to: ftp://ftp.gateway.com/pub/hardware_support/drivers/win3.x_and_dos/mass_storage/hard_drives/7510801.txt

# Internet

#### You cannot connect to the Internet

- If you are using a telephone line to access the Internet, make sure that your server is connected to the telephone line and the telephone line has a dial tone.
- If you are using a telephone line to access the Internet, make sure that no one else in the business is using the telephone line.
- If you are using a telephone line to access the Internet and you have the call waiting feature on your telephone line, make sure that it is disabled.
- Make sure that your account with your Internet service provider (ISP) is set up correctly. Contact your ISP technical support for help.
- Make sure that you do not have a problem with your modem. For more information, see "Modem (telephone dial-up)" on page 95.

#### You receive an "Unable to locate host" message and are unable to browse the Internet

This problem can occur when you have typed a URL (Web address) incorrectly, lost your Internet connection, or your ISP is having technical difficulties.

Re-type the URL or try a different URL. If the error message still appears, disconnect from the ISP connection and close your browser, then reconnect and open the browser. If you still get the error, your ISP may be having technical difficulties.

### Connecting to a Web site takes too long

Many factors can affect Internet performance:

- Condition of the telephone lines in your business
- Condition of the telephone lines and switches at your local telephone service
- Condition of the Internet computers to which you connect and the number of users accessing those computers
- Complexity of graphics and multimedia on Web pages
- Having multiple Web browsers open, performing multiple downloads, and having multiple programs open on your server

## Keyboard

### The keyboard does not work

- Make sure that the keyboard cable is plugged into the correct port.
- Remove all extension cables and switchboxes.
- Clean the keyboard by using an aerosol can of air with a narrow, straw-like extension to remove dust and lint trapped under the keys.
- Try a keyboard that you know works to make sure that the keyboard port works.
- Reinstall the keyboard device driver. For more information, see *Using Your Server Companion CD*.

### A keyboard character keeps repeating

- Make sure that nothing is resting on the keyboard.
- Make sure that a key is not stuck. Press each key to loosen a key that might be stuck, then restart your server.

### Liquid has been spilled into the keyboard

- If you spilled liquid in the keyboard, turn off your server and unplug the keyboard. Clean the keyboard and turn it upside down to drain it. Let the keyboard dry before using it again. If the keyboard does not work after it dries, you may need to replace it. This type of damage is not covered by your server's warranty.

# Memory

### Memory errors were detected during server start up

- Open your server and make sure that the memory modules are installed correctly. For more information, see "Installing memory" on page 54.
- A memory module may be defective. If possible, try another memory module and see if the error repeats.

# Modem (telephone dial-up)

### Your modem does not dial or does not connect

- Make sure that your server is connected to the telephone line and the telephone line has a dial tone.
- Make sure that the modem cable is less than 6 feet (1.8 meters) long.
- Remove any line splitters or surge protectors from your telephone line, then check for a dial tone by plugging a working telephone into the telephone jack.
- If you have additional telephone services such as call waiting, call messaging, or voice mail, make sure that all messages are cleared and call waiting is disabled before using the modem. Contact your telephone service to get the correct code to temporarily disable the service. Also make sure that the modem dialing properties are set correctly.

#### To check the dialing properties in Windows 2000 Server:

1. Click **Start**, **Settings**, then click **Control Panel**. The *Control Panel* window opens.
2. Double-click the **Modems** icon, then click **Dialing Properties**. The *Dialing Properties* dialog box opens.
3. Make sure that all settings are correct.

- Make sure that you are not using a digital, rollover, or PBX line. These lines do not work with your modem.

- Check for line noise (scratchy, crackling, or popping sounds). Line noise is a common problem that can cause the modem to connect at a slower rate, abort downloads, or even disconnect. The faster the modem, the less line noise it can tolerate and still work correctly.

  Listen to the line using your telephone. Dial a single number (such as 1). When the dial tone stops, listen for line noise. Wiggle the modem cable to see if that makes a difference. Make sure that the connectors are free from corrosion and all screws in the wall or telephone jack are secure.

  You can also call your telephone service and have your telephone line checked for noise or low line levels.

- Try another telephone line (either a different telephone number in your business or a telephone line at a different location). If you can connect on this line, call your telephone service.
- Try connecting with the modem at a lower connection speed. If reducing the connection speed lets you connect, contact your telephone service. The telephone line may be too noisy.

### You cannot connect to the Internet

- The ISP may be having technical difficulties. Contact your ISP technical support for help.
- Try a different communications program. The problem may be with just one program.

### Your 56K modem does not connect at 56K

Current FCC regulations restrict actual data transfer rates over public telephone lines to 53K. Other factors, such as line noise, telephone service provider equipment, or ISP limitations, may lower the speed even further.

If your system has a v.90 modem, the speed at which you can upload (send) data is limited to 33.6K. If your system has a v.92 modem, the speed at which you can upload data is limited to 48K. Your ISP may not support 48K uploads.

### Your fax communications program only sends and receives faxes at 14,400 bps even though you have a 56K modem

Current fax technology only supports a maximum send and receive rate of 14,400 bps.

### The modem is not recognized by your server

- Make sure that the line connected to the modem is working and plugged into the correct jack on the modem.

- If the modem shares the telephone line with another device, make sure that the telephone line is not in use (for example, someone is on the telephone, or another modem is in use).
- Shut down and restart your server.
- In Windows 2000 Server, run Windows modem diagnostics.

### To run modem diagnostics in Windows 2000 Server:

1. Close all open programs.
2. Click **Start**, **Settings**, then click **Control Panel**. The *Control Panel* window opens.
3. Double-click the **Modems** icon. The *Modems Properties* dialog box opens.
4. Click the **Diagnostic** tab, click the COM port next to the name of the modem, then click **More Info**. The *Modem Info* dialog box opens.

   If information about the modem appears, the modem passed diagnostics. If no modem information appears, a white screen appears with no data, or if you get an error such as *port already open* or *the modem has failed to respond*, the modem did not pass diagnostics.

- Reinstall the device driver. For more information, see *Using Your Server Companion CD*.
- Open your server and reseat the modem. For more information, see "Installing PCI expansion cards" on page 56.

### The modem is noisy when it dials and connects

When your modem tries to connect to another modem, it begins *handshaking*. Handshaking is a digital "getting acquainted" conversation between the two modems that establishes connection speeds and communication protocols. You may hear unusual handshaking sounds when the modems first connect. If the sounds are too loud, you can turn down the modem volume.

### To turn down the modem volume in Windows 2000 Server:

1. Click **Start**, **Settings**, then click **Control Panel**. The *Control Panel* window opens.
2. Double-click the **Modems** icon. The *Modems Properties* dialog box opens.
3. Click the modem you want to adjust, then click **Properties**.
4. Adjust the **Speaker volume** control, then click **OK**.

# Monitor

### The screen resolution is not correct

- In Windows 2000 Server, change the screen resolution from the *Display Properties* dialog box.

### Your server is running but there is no picture

- Make sure that the monitor is plugged in and turned on. If the monitor is turned on, the power LED should be lit.
- Adjust the brightness and contrast controls to the center position.
- Make sure that the monitor cable is connected to the monitor port on the back of your server.
- Check the port and cable for bent or damaged pins.
- Reinstall the device driver. For more information, see *Using Your Server Companion CD*.
- Connect your monitor to another computer, or connect a monitor that you know works to your server.

### The color is not uniform

Make sure that the monitor warms up for at least 30 minutes before making a final judgment about color uniformity.

Make sure that:

- The monitor is not positioned too close to another monitor, electric fan, fluorescent light, metal shelf, or laser printer.

- You demagnetize the screen using the monitor's degauss feature. For more information on degauss, see the monitor's documentation.

### A horizontal line or wire is visible across the monitor screen

The monitor may use a thin *damper* wire, located approximately 1/3 of the way down from the upper screen edge and 1/3 of the way up from the lower screen edge, to stabilize the internal aperture grille. These wires are most obvious when the monitor displays a white background. The aperture grille allows more light to pass through the screen for brighter colors and greater luminescence. The damper wire is a critical part of the overall monitor design and does not negatively affect the monitor's function.

### The text on the display is dim or difficult to read

- Adjust the brightness and contrast controls.
- Demagnetize the screen using the monitor's degauss feature. For more information on degauss, see the monitor's documentation.
- Turn off your server and monitor, leave them off for at least a half hour, then turn on your server and monitor.
- Change the display settings.
- Move the monitor or monitor cables away from sources of electrical interference, such as televisions, unshielded speakers, microwaves, or fluorescent lights.

## Mouse

### The mouse does not work

- Clean the mouse by following the instructions in "Cleaning the mouse" on page 30.
- Make sure that the mouse cable is plugged in correctly.
- Shut down and restart your server.
- Remove all extension cables and switchboxes
- Try a mouse you know is working to make sure that the mouse port works.
- Reinstall the device driver. For more information, see *Using Your Server Companion CD*.

# Power

### You press the power button, but the server does not turn on

- The server may not be connected to an AC power source. Check the power connections, or try another wall outlet.
- If the power button LED is green, the server is turned on, but you may not be seeing an image on the monitor. For monitor troubleshooting, see "Monitor" on page 98.
- If your server is plugged into a surge protector or UPS, make sure that the surge protector or UPS is connected securely to an electrical outlet, turned on, and working correctly. One way to check this is to plug the server directly into a wall outlet, bypassing the surge protector or UPS.
- Make sure that all devices are connected securely to the surge protector and turned on correctly.
- Make sure that the electrical outlet is working by plugging a working device, such as a lamp, into the outlet, then turning it on to test the outlet.
- Open your server and make sure that the power supply cable is connected correctly to the system board.
- Open your server and make sure that the power button cable is connected correctly to the system board.

### When you turn on the server, it makes several short beeps

- The short beeps indicate the server has encountered some type of error. See "Beep codes" on page 86.

# Printer

### Printer will not turn on

- Make sure that the power cord is plugged into an AC power source.

### Printer is on but will not print

- Make sure that the printer is online. Many printers have an online/offline button that you may need to press.
- Make sure that the cable between the printer and your server is connected securely to the correct port.
- Print a test page.

- Check the port and cable for bent or broken pins.
- Make sure that the printer is shared on the network (if applicable).
- Reinstall the printer driver. For more information, see your printer's documentation.

### You receive a "Printer queue is full" error message

- Make sure that the printer is not set to work offline.

#### To make sure that the printer is not set to work offline in Windows 2000 Server:

1. Click **Start**, **Settings**, then click **Printers**. The *Printers* window opens.
2. Double-click the icon for the printer you want to use.
3. Click **Printer**. If there is a **Use Printer Offline** option on the menu, click it to clear the check mark.

   - OR -

   Click **Printer**. If there is a **Connect** option on the menu, click it to connect to the printer.

- Stop and restart the spooler service. For more information, see your operating system's documentation.
- Wait until files have been printed before sending additional files to the printer.
- If you print large files or many files at one time, you may want to add additional memory to the printer. See the printer's documentation for more information about adding additional memory.

### You receive a "Printer is out of paper" error message

- After adding paper, make sure that the printer is online. Many printers have an online/offline button that you need to press after adding paper.

# Processor

### Your server does not recognize a new processor

- Make sure that the processor is fully seated in its socket. The processor should be recognized automatically if it is installed correctly.

# Telephone support

## Before calling Gateway Technical Support

If you have a technical problem with your server, follow these recommendations before contacting Gateway Technical Support:

- Make sure that your server is connected correctly to a grounded AC outlet that is supplying power.
- If a peripheral device, such as a keyboard or mouse, does not appear to work, make sure that all cables are plugged in securely.
- If you have recently installed hardware or software, make sure that you have installed it following the instructions provided with it. If you did not purchase the hardware or software from Gateway, see the manufacturer's documentation and technical support resources.
- If you have "how to" questions about using a program, see:
  - The program's online Help
  - The program's documentation
  - Your operating system's documentation
  - The software or hardware manufacturer's Web site
- See "Troubleshooting" on page 85.
- Have your client ID, serial number (located on the back of your server case), and order number available, along with a detailed description of your issue, including the exact text of any error messages, and the steps you have taken.
- Make sure that your server is nearby at the time of your call. The technician may have you follow appropriate troubleshooting steps.
- Consider using Gateway's Internet technical support. Gateway's Web site has FAQs, tips, and other technical help. You can also use the Web site to e-mail Technical Support. For more information, visit Gateway's Technical Support Web site at support.gateway.com.

# Telephone support

Gateway offers a wide range of customer service, technical support, and information services.

## Automated troubleshooting system

| Service description | How to reach |
|---|---|
| Use an automated menu system and your telephone keypad to find answers to common problems. | 800-846-2118 (US)<br>877-709-2945 (Canada) |

## Telephone numbers

You can access the following services through your telephone to get answers to your questions:

| Resource | Service description | How to reach |
|---|---|---|
| Fax on demand support | Order a catalog of documents on common problems, then order documents by document numbers. The documents will be faxed to you. | 800-846-4526 (US)<br>877-709-2951 (Canada) |
| Tutorial support | Learn networking tips from Gateway's tutorial support on a per-issue fee basis. | 877-485-1464 (US)<br>800-846-3609 (Canada and Puerto Rico)<br>605-232-2191 (all other countries)<br>800-846-1778 (TDD) |
| Gateway Technical Support | Talk to a Gateway Technical Support representative about a non-tutorial technical support question. (See "Before calling Gateway Technical Support" on page 103 before calling.)<br>TDD Technical Support (for hearing impaired) is available:<br>Weekdays 6:00 a.m. - 8:00 p.m. Central Time<br>Weekends 6:00 a.m. - 5:00 p.m. Central Time | 877-485-1464 (US)<br>800-846-3609 (Canada and Puerto Rico)<br>605-232-2191 (all other countries)<br>800-846-1778 (TDD) |
| Sales, accounting, and warranty | Get information about available systems, pricing, orders, billing statements, warranty service, or other non-technical issues. | 800-846-2000 (US)<br>888-888-2037 (Canada) |

# Tutoring and training

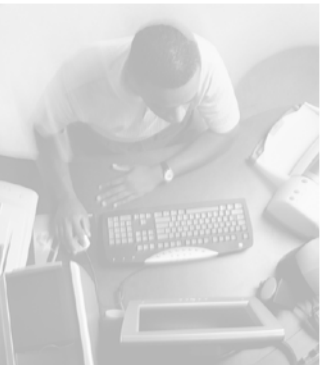
Gateway's Technical Support professionals cannot provide hardware and software training. Instead, Gateway recommends the following training resources.

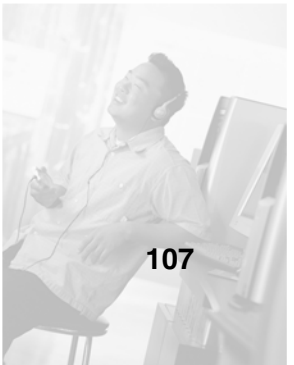
| Resource | Service description | For more information |
|---|---|---|
| In-Store Training at Gateway stores | Our friendly and knowledgeable software trainers can teach you how to use the Internet and the most popular software programs, including Microsoft Word, Excel, and PowerPoint. | www.gateway.com/country |
| Gateway Learning Libraries | A variety of courses and tutorials are available on CD. Select from several easy-to-use learning libraries. | www.gateway.com/training |
| Online Training from Learn@Gateway | More than 450 online courses are available from Learn@Gateway. All you have to do is go online and log in. You select the subject matter, and the learning format (self-paced tutorials or virtual classrooms), all from the comfort of your computer. | www.learnatgateway.com |

# A

# Server Specifications

The following specifications are for the standard configuration. Your server may contain optional equipment. All specifications are subject to change.





# System specifications

| | |
|---|---|
| **Case size** | 7.75 × 18 × 17.5 inches (19.69 × 45.72 × 44.45 cm) |
| **Weight** | Varies by configuration |
| **Fans** | Chassis fan (speed adjustable)<br>CPU heat sink fan (speed adjustable) |
| **Ports** | ▪ PS/2 keyboard<br>▪ PS/2 mouse<br>▪ USB (4)<br>▪ Serial<br>▪ VGA<br>▪ Parallel<br>▪ RJ-45 LAN |
| **Drives (standard)** | ▪ 3.5-inch diskette<br>▪ CD-ROM |
| **Power supply** | 250 W<br>ATX power connector |
| **Operating systems** | Supports Windows 2000 Server<br>Compatible with:<br>▪ Windows NT<br>▪ Novell NetWare 6 |
| **Certifications** | ▪ FCC Class B<br>▪ UL<br>▪ cUL |

# System board specifications

| | |
|---|---|
| **Processor** | Supports a single FC-PGA2 Intel Pentium 4 or Intel Celeron CPU<br>478-pin socket<br>533 MHz system bus<br>On-board VRM 9.0 |
| **Chipset** | ServerWorks GC_SL<br>533 MHz and 400 MHz FSB<br>200 MHz and 266 MHz registered ECC DDR SDRAM<br>Thin-IMB chipset-to-chipset connection<br>2 ATA-100 IDE channels (primary and secondary)<br>1 ATA-66 IDE channel (tertiary)<br>4 USB 1.1 ports (2 front, 2 rear)<br>64-bit/33 MHz PCI bus |
| **Memory** | Four DIMM slots<br>Supports up to 4 GB registered PC2100 DDR SDRAM.<br>ECC support |
| **PCI device/slot** | 3.3V/64-bit/33 MHz PCI slots (4)<br>3.3V/32-bit/33 MHz PCI slot (1)<br>On-board VGA and NIC (32-bit) |
| **VGA** | On-board ATI Rage XL<br>▪ 32-bit/33 MHz PCI interface<br>▪ 8 MB SDRAM |
| **LAN** | On-board Intel 82540EM<br>▪ 32-bit/33 MHz PCI interface<br>▪ 10/1001000 Ethernet |
| **Super I/O** | National Semiconductor PC87414<br>▪ LPC interface<br>▪ Diskette<br>▪ PS/2 keyboard and mouse<br>▪ Parallel port (ECP/EPP)<br>▪ Serial port |
| **ROM** | Flash BIOS<br>▪ AMD AM29F004BT-70<br>▪ 4 MB-64KB × 8 |

| | |
|---|---|
| **ACPI** | ACPI compliant<br>Supports S0, S1, S4, and S5 |
| **Hardware Monitor** | On-board LM81 × 1+MAX1617A on SMBus<br>Main logic board sensors:<br>▪ +2.5V, +3.3V, +5V, +12V, VTT, CPU core<br>▪ System and CPU temperature<br>▪ CPU fan speed measurement and control |

# Hardware monitor specifications

## Voltage

| Voltage Source | Maximum Value | Minimum Value |
|---|---|---|
| VTT | 1.312V | 1.150V |
| Vcc 12V | 13.187V | 10.750V |
| Vcc 5V | 5.486V | 4.498V |
| Vcc 3.3V | 3.457V | 3.130V |
| Vcc 2.5V | 2.874V | 2.444V |
| CPU Vcore (1.5V) | 1.565V | 1.367V |

## Fan

| Fan | Maximum Value | Minimum Value |
|---|---|---|
| CPU fan | N/A | 1200 RPM |
| System fan 2 | N/A | 1200 RPM |

# Temperature sensor specifications

| Temperature Type | Maximum Value | | Minimum Value |
|---|---|---|---|
| CPU temperature | *Varies depending on CPU specifications* | | 32°F (0°C) |
| | Intel P4 1.8 GHz | 171°F (77°C) | |
| | Intel P4 1.9 GHz | 167°F (75°C) | |
| | Intel P4 2.0 GHz | 154°F (68°C) | |
| | Intel P4 2.2 GHz | 156°F (69°C) | |
| | Intel P4 2.4 GHz | 158°F (70°C) | |
| System temperature | 158°F (70°C) | | |

# Environmental specifications

The following specifications identify maximum environmental conditions. At no time should the server run under conditions which violate these specifications.

| Variable | Requirements |
|---|---|
| Temperature | Maximum rate of change: 18°F (10°C) per hour<br>Non-operating: -55° to 150°F (-48.3° to 65.5°C)<br>Operating: 41° to 95°F (5° to 35°C); derated 0.9°F (0.5°C) for every 1,000 feet (305 meters) |
| Altitude | 10,000 feet (3,048 meters) maximum |
| Humidity | Operating wet bulb: Not to exceed 91.4°F (33 °C) (with diskette drive or hard drive)<br>Non-operating: 95% relative (non-condensing) at 86° F (30° C) |
| Shock | Operating: 2.0 g, 11 msec, ½ sine<br>Packaged: Operational after 30-inch free fall (cosmetic damage might occur) |
| AC input power | 100-120 V~, 6.5 A, 50/60 Hz<br>220-240 V~, 3.5 A, 50/60 Hz |

# Video specifications

- Full AGP side-band signalling
- 3D graphics, multimedia and windows accelerator
- DDC 2B support
- 3D texture mapping engine
- Digital video engine
- DirectDraw support
- Direct 3D support
- Integrated 230 MHz DAC
- 8 MB memory

## Resolution support

| | Refresh Rate (Hz) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Resolution** | **43** | **60** | **66** | **70** | **72** | **75** | **76** | **85** | **90** | **100** |
| 640 × 480 | | × | | | × | × | | | × | × |
| 800 × 600 | | × | | × | | × | | | × | × |
| 1024 × 768 | | × | | | × | × | | | × | × |
| 1280 × 1024 | × | × | | × | × | | | | | |
| 1600 × 1200 | | × | × | | | | × | × | | |

# Electronic specifications

## System I/O addresses

The following table shows the location in I/O space of all directly I/O-accessible registers.

| Address | Resource |
|---|---|
| 0000h - 000Fh | DMA Controller 1 |
| 0010h - 001Fh | DMA Controller 1 |
| 0020h - 0021h | Interrupt Controller 1 |
| 0022h - 0023h | |
| 0024h - 0025h | Interrupt Controller 1 |
| 0026h - 0027h | |
| 0028h - 0029h | Interrupt Controller 1 |
| 002Ah - 002Bh | |
| 002Ch - 002Dh | Interrupt Controller 1 |
| 002Eh - 002Fh | Super I/O Index and Data Ports |
| 0030h - 0031h | Interrupt Controller 1 |
| 0032h - 0033h | |
| 0034h - 0035h | Interrupt Controller 1 |
| 0036h - 0037h | |
| 0038h - 0039h | Interrupt Controller 1 |
| 003Ah - 003Bh | |
| 003Ch - 003Dh | Interrupt Controller 1 |
| 003Eh - 003Fh | |
| 0040h - 0043h | Programmable Timers |
| 0044h - 004Fh | |

| Address | Resource |
|---|---|
| 0050h - 0053h | Programmable Timers |
| 0054h - 005Fh | |
| 0060h, 0064h | Keyboard Controller |
| 0061h | NMI Status and Control Register |
| 0063h | NMI Status and Control Register |
| 0065h | NMI Status and Control Register |
| 0067h | NMI Status and Control Register |
| 0070h | NMI Mask (bit 7) and RTC Address (bits 6::0) |
| 0072h | NMI Mask (bit 7) and RTC Address (bits 6::0) |
| 0074h | NMI Mask (bit 7) and RTC Address (bits 6::0) |
| 0076h | NMI Mask (bit 7) and RTC Address (bits 6::0) |
| 0071h | RTC Data |
| 0073h | RTC Data |
| 0075h | RTC Data |
| 0077h | RTC Data |
| 0080h - 008Fh | DMA Low Page Register |
| 0090h - 0091h | DMA Low Page Register |
| 0092h | System Control Port A (PC-AT control Port) |
| 0093h - 009Fh | DMA Low Page Register |
| 0094h | Video Display Controller |
| 00A0h - 00A1h | Interrupt Controller 2 |
| 00A4h - 00A15 | Interrupt Controller 2 |
| 00A8h - 00A19 | Interrupt Controller 2 |
| 00Ach - 00Adh | Interrupt Controller 2 |
| 00B0h - 00B1h | Interrupt Controller 2 |
| 00B2h | Advanced Power Management Control |

| Address | Resource |
|---|---|
| 00B3h | Advanced Power Management Status |
| 00B4h - 00B5h | Interrupt Controller 2 |
| 00B8h - 00B9h | Interrupt Controller 2 |
| 00BCh - 00BDh | Interrupt Controller 2 |
| 00C0h - 00DFh | DMA Controller 2 |
| 00F0h | Clear NPX error |
| 00F8h - 00FFh | x87 Numeric Coprocessor |
| 0102h | Video Display Controller |
| 0170h - 0177h | Secondary Fixed Disk Controller (IDE) |
| 01F0h - 01F7h | Primary Fixed Disk Controller (IDE) |
| 0200h - 0207h | Game I/O Port |
| 0220h - 022Fh | Serial Port A |
| 0238h - 023Fh | Serial Port B |
| 0278h - 027Fh | Parallel Port 3 |
| 02E8h - 02Efh | Serial Port B |
| 02F8h - 02FFh | Serial Port B |
| 0338h - 033Fh | Serial Port B |
| 0370h - 0375h | Secondary Diskette |
| 0376h | Secondary IDE |
| 0377h | Secondary IDE/Diskette |
| 0378h - 037Fh | Parallel Port 2 |
| 03B4h - 03Bah | Monochrome Display Port |
| 03BCh - 03BFh | Parallel Port 1 (Primary) |
| 03C0h - 03CFh | Video Display Controller |
| 03D4h - 03DAh | Color Graphics Controller |
| 03E8h - 03EFh | Serial Port A |

| Address | Resource |
|---|---|
| 03F0h - 03F5h | Diskette Controller |
| 03F6h - 03F7h | Primary IDE - Sec. Diskette |
| 03F8h - 03FFh | Serial Port A (Primary) |
| 0400h - 043Fh | DMA Controller 1, Extended Mode Registers |
| 04D0h - 04D1h | Interrupt Controllers 1 and 2 Control Register |
| 0678h - 067Ah | Parallel Port (ECP) |
| 0778h - 077Ah | Parallel Port (ECP) |
| 07BCh - 07BEh | Parallel Port (ECP) |
| 0CA0 - CA3h | BMC Registers |
| 0CF8h | PCI CONFIG_ADDRESS Register |
| 0CF9h | NBX Turbo and Reset control |
| 0CFCh | PCI CONFIG_DATA Register |
| 46E8h | Video Display Controller |

# Memory map

| Address Range (hex) | Amount | Function |
|---|---|---|
| 0 to 07FFFFh | 640 KB | DOS region, base system memory |
| 0A0000h to 0BFFFFh | 128 KB | Video or SMM memory |
| 0C0000h and 0DFFFFh | 128 KB | Expansion card BIOS and buffer area |
| 0E0000h to 0FFFFFh | 128 KB | System BIOS |
| 0E0000h to 0EFFFFh | 2 MB | Extended system BIOS |
| FC000000h to FFFFFFFFh | 64 MB | PCI memory space |

# IRQ assignments

The following table reflects a typical configuration, but you can change these interrupts. Use this information to determine how to program each interrupt. The actual interrupt map is defined using configuration registers in the I/O controller. I/O Redirection Registers in the I/O APIC are provided for each interrupt signal. The signals define hardware interrupt signal characteristics for APIC messages sent to local APIC(s).

**Important**

If you disable an IDE controller to free the interrupt for that controller, you must physically unplug the IDE cable from the system board. Simply disabling the drive by configuring the SSU option does not make the interrupt available.

| Interrupt (IRQ) | Description |
|---|---|
| 0 | 8254 timer |
| 1 | Keyboard controller |
| 2 | Cascade |
| 3 | Serial port |
| 4 | Serial port |
| 5 | [Unassigned] |
| 6 | Diskette controller |
| 7 | Parallel |
| 8 | Real-time clock |
| 9 | ACPI SCI |
| 10 | USB |
| 11 | Third IDE |
| 12 | Mouse controller |
| 13 | System interrupt/FERR |
| 14 | Primary IDE |
| 15 | Secondary IDE |

# PCI interrupt routing

## PCI interrupt routing in PIC mode

| Device | Interrupt A | Interrupt B | Interrupt C | Interrupt D |
|---|---|---|---|---|
| USB | PCI IRQ 5 | | | |
| Intel 82540EM | PCI IRQ 1 | | | |
| Rage XL | PCI IRQ 0 | | | |
| PCI slot 1 | PCI IRQ 2 | PCI IRQ 3 | PCI IRQ 2 | PCI IRQ 3 |
| PCI slot 2 | PCI IRQ 4 | PCI IRQ 6 | PCI IRQ 4 | PCI IRQ 6 |
| PCI slot 3 | PCI IRQ 7 | PCI IRQ 8 | PCI IRQ 7 | PCI IRQ 8 |
| PCI slot 4 | PCI IRQ 9 | PCI IRQ 10 | PCI IRQ 9 | PCI IRQ 10 |
| PCI slot 5 | PCI IRQ 11 | PCI IRQ 12 | PCI IRQ 11 | PCI IRQ 12 |

## PCI interrupt routing in APIC mode

| IO APIC Entry | IO APIC | Interrupt Source |
|---|---|---|
| INTIN 0 | ISA IO APIC | IRQ 0 / INTR |
| INTIN 1 | ISA IO APIC | IRQ 1 |
| INTIN 2 | ISA IO APIC | IRQ 2 / SMI |
| INTIN 3 | ISA IO APIC | IRQ 3 |
| INTIN 4 | ISA IO APIC | IRQ 4 |
| INTIN 5 | ISA IO APIC | IRQ 5 |
| INTIN 6 | ISA IO APIC | IRQ 6 |
| INTIN 7 | ISA IO APIC | IRQ 7 |
| INTIN 8 | ISA IO APIC | IRQ 8 |
| INTIN 9 | ISA IO APIC | IRQ 9 |
| INTIN 10 | ISA IO APIC | IRQ 10 |
| INTIN 11 | ISA IO APIC | IRQ 11 |
| INTIN 12 | ISA IO APIC | IRQ 12 |

| IO APIC Entry | IO APIC | Interrupt Source |
|---|---|---|
| INTIN 13 | ISA IO APIC | IRQ 13 |
| INTIN 14 | ISA IO APIC | IRQ 14 |
| INTIN 15 | ISA IO APIC | IRQ 15 |
| INTIN 0 | PCI IO APIC | VGA Rage XL INTA# |
| INTIN 1 | PCI IO APIC | NIC Intel Kenai 32 |
| INTIN 2 | PCI IO APIC | Slot 1 INTA# & INTC# |
| INTIN 3 | PCI IO APIC | Slot 1 INTB# & INTD# |
| INTIN 4 | PCI IO APIC | Slot 2INTA# & INTC# |
| INTIN 5 | PCI IO APIC | Unused |
| INTIN 6 | PCI IO APIC | Slot 2INTB# & INTD# |
| INTIN 7 | PCI IO APIC | Slot 3 INTA# & INTC# |
| INTIN 8 | PCI IO APIC | Slot 3 INTB# & INTD# |
| INTIN 9 | PCI IO APIC | Slot 4 INTA# & INTC# |
| INTIN 10 | PCI IO APIC | Slot 4 INTB# & INTD# |
| INTIN 11 | PCI IO APIC | Slot 5 INTA# & INTC# |
| INTIN 12 | PCI IO APIC | Slot 5 INTB# & INTD# |
| INTIN 13 | PCI IO APIC | |
| INTIN 14 | PCI IO APIC | |
| INTIN 15 | PCI IO APIC | |

# Additional specifications

For more information about your server, such as memory size, hard drive size, and processor type, visit Gateway's *eSupport* page at support.gateway.com. The *eSupport* page also has links to additional Gateway documentation and detailed specifications for your own server.

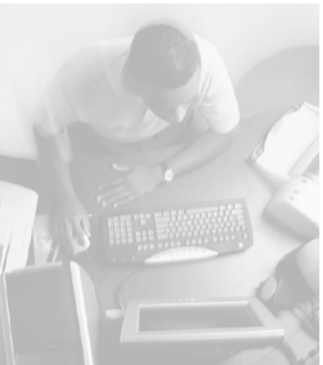
# B

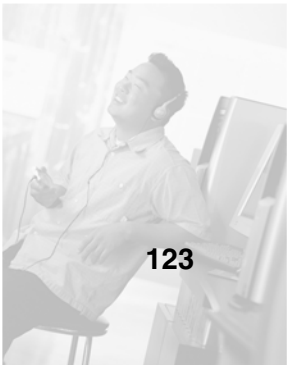
# BIOS Settings

You can print this appendix, then record your custom BIOS settings on the printout. Only settings which can be changed are listed in this appendix. For a complete list of viewable BIOS settings, run the BIOS Setup utility.

### To view all BIOS settings:

1. Restart your server, then press **F2** when the Gateway logo screen appears during startup. The BIOS Setup utility opens.
2. Select menus and submenus to display setting information.





| BIOS menu | BIOS submenu | Setting | Value |
|---|---|---|---|
| Main | | System Time | |
| | | System Date | |
| Advanced | SuperIO Configuration | Serial Port1 (Address/IRQ) | |
| | | Parallel Port Address | |
| | | Parallel Port IRQ | |
| | | Parallel Port Mode | |
| | | ECP Mode DMA Channel | |
| | IDE Configuration | On-board PCI IDE Controller | |
| | | Primary IDE Master | |
| | | Primary IDE Slave | |
| | | Secondary IDE Master | |
| | | Secondary IDE Slave | |
| | | Hard Disk Write Protect | |
| | | Tertiary IDE Channel mode | |
| | IDE Configuration: Primary IDE Master | Type | |
| | | LBA/Large Mode | |
| | | Block Mode | |
| | | PIO Mode | |
| | | DMA Mode | |
| | | S.M.A.R.T. | |
| | | 32Bit Data Transfer | |
| | | ARMD Emulation Type | |
| | IDE Configuration: Secondary IDE Master | Type | |
| | | LBA/Large Mode | |

| BIOS menu | BIOS submenu | Setting | Value |
|---|---|---|---|
| | | Block Mode | |
| | | PIO Mode | |
| | | DMA Mode | |
| | | S.M.A.R.T. | |
| | | 32Bit Data Transfer | |
| | | ARMD Emulation Type | |
| | IDE Configuration: Secondary IDE Slave | Type | |
| | | LBA/Large Mode | |
| | | Block Mode | |
| | | PIO Mode | |
| | | DMA Mode | |
| | | S.M.A.R.T. | |
| | | 32Bit Data Transfer | |
| | | ARMD Emulation Type | |
| | IDE Configuration: Floppy Configuration | Floppy A | |
| | On-Board Devices Configuration | On-Board LAN | |
| | | On-Board PCI VGA | |
| | PCIPnP Configuration | Legacy USB Support | |
| | | PCI Slot-1 IRQ Preference | |
| | | PCI Slot-2 IRQ Preference | |
| | | PCI Slot-3 IRQ Preference | |
| | | PCI Slot-4 IRQ Preference | |

| BIOS menu | BIOS submenu | Setting | Value |
|---|---|---|---|
| | | PCI Slot-5 IRQ Preference | |
| | Boot Settings Configuration | Bootup Num-Lock | |
| | Event Log Configuration | Event Log Area | |
| | | Event Log Data | |
| | | Event Logging | |
| | | ECC Event Logging | |
| | | Clear All Event Logs | |
| | System Health Monitoring Hardware | Case Status | |
| | | Current CPU1 Temp. | |
| | | Current System Temp. | |
| | | Current CPU Fan Speed | |
| | | Current System Fan 1 Speed | |
| | | Current System Fan 2 Speed | |
| | System Health Monitoring Hardware: Voltage Monitoring | VTT | |
| | | Vcc 12V | |
| | | Vcc 5V | |
| | | Vcc 3.3V | |
| | | Vcc 2.5V | |
| | | CPU Vcore | |
| | | LAN 1.5V | |
| | | Vcc 5V Standby | |
| | | Vcc 3.3V Standby | |

| BIOS menu | BIOS submenu | Setting | Value |
|---|---|---|---|
| | | VGA 2.5V | |
| | | Vdd_IMB 1.5V | |
| | Remote Access Configuration | Remote Access | |
| Power | | AC Power Failure | |
| | | Power Button Mode | |
| Boot | Boot Device Priority | 1st Boot Device | |
| | | 2nd Boot Device | |
| | | 3rd Boot Device | |
| | Hard Disk Drives | 1st Hard Drive | |
| | | 2nd Hard Drive | |
| | Removable Devices | Removable Dev | |
| | ATAPI CDROM Drives | 1st ATAPI CDROM | |
| Security | | Supervisor Password | |
| | | User Password | |

# C

# Safety, Regulatory, and Legal Information

## Important safety information

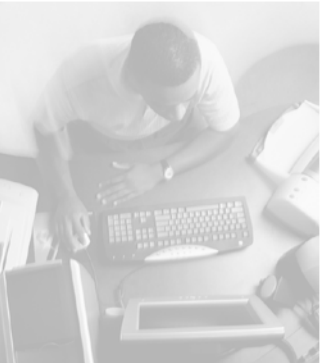
Your Gateway system is designed and tested to meet the latest standards for safety of information technology equipment. However, to ensure safe use of this product, it is important that the safety instructions marked on the product and in the documentation are followed.

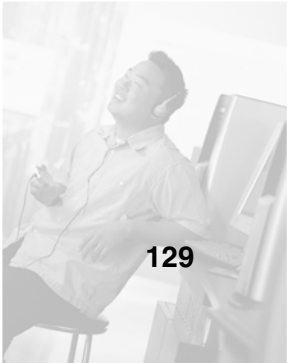
**Warning**

Always follow these instructions to help guard against personal injury and damage to your Gateway system.

### Setting up your system

- Read and follow all instructions marked on the product and in the documentation before you operate your system. Retain all safety and operating instructions for future use.
- Do not use this product near water or a heat source such as a radiator.
- Set up the system on a stable work surface.





- The product should be operated only from the type of power source indicated on the rating label.
- If your computer has a voltage selector switch, make sure that the switch is in the proper position for your area. The voltage selector switch is set at the factory to the correct voltage.
- Openings in the computer case are provided for ventilation. Do not block or cover these openings. Make sure you provide adequate space, at least 6 inches (15 cm), around the system for ventilation when you set up your work area. Never insert objects of any kind into the computer ventilation openings.
- Some products are equipped with a three-wire power cord to make sure that the product is properly grounded when in use. The plug on this cord will fit only into a grounding-type outlet. This is a safety feature. If you are unable to insert the plug into an outlet, contact an electrician to install the appropriate outlet.
- If you use an extension cord with this system, make sure that the total ampere rating on the products plugged into the extension cord does not exceed the extension cord ampere rating.

### Care during use

- Do not walk on the power cord or allow anything to rest on it.
- Do not spill anything on the system. The best way to avoid spills is to avoid eating and drinking near your system.
- Some products have a replaceable CMOS battery on the system board. There is a danger of explosion if the CMOS battery is replaced incorrectly. Replace the battery with the same or equivalent type recommended by the manufacturer. Dispose of batteries according to the manufacturer's instructions.
- When the computer is turned off, a small amount of electrical current still flows through the computer. To avoid electrical shock, always unplug all power cables and modem cables from the wall outlets before cleaning the system.
- Unplug the system from the wall outlet and refer servicing to qualified personnel if:
- The power cord or plug is damaged.
- Liquid has been spilled into the system.
- The system does not operate properly when the operating instructions are followed.
- The system was dropped or the cabinet is damaged.
- The system performance changes.

### Replacement parts and accessories

Use only replacement parts and accessories recommended by Gateway.

**Important**

Do not use Gateway products in areas classified as hazardous locations. Such areas include patient care areas of medical and dental facilities, oxygen-laden environments, or industrial facilities.

**Warning**

To reduce the risk of fire, use only No. 26 AWG or larger telecommunications line cord.

# Regulatory compliance statements

## United States of America

### Federal Communications Commission (FCC)
### Unintentional emitter per FCC Part 15

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment to an outlet on a different circuit from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

**Compliance Accessories**: The accessories associated with this equipment are: shielded video cable when an external monitor is connected. These accessories are required to be used in order to ensure compliance with FCC rules.

### FCC declaration of conformity

**Responsible party:**

Gateway Companies, Inc.
610 Gateway Drive, North Sioux City, SD 57049
(605) 232-2000 Fax: (605) 232-2023

**Product:** Gateway 920

For unique identification of the product configuration, please submit the 10-digit serial number found on the product to the responsible party.

This device complies with Part 15 of the FCC Rules. Operation of this product is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

**Caution**

Changes or modifications not expressly approved by Gateway could void the FCC compliance and negate your authority to operate the product.

### Telecommunications per FCC part 68 (applicable to products fitted with USA modems)

Your modem complies with Part 68 of the Federal Communications Commission (FCC) rules. On the computer or modem card is a label that contains the FCC registration number and Ringer Equivalence Number (REN) for this device. If requested, this information must be provided to the telephone company.

An FCC-compliant telephone line cord with a modular plug is required for use with this device. The modem is designed to be connected to the telephone network or premises wiring using a compatible modular jack which is Part 68-compliant. See installation instructions for details.

The Ringer Equivalence Number (REN) is used to determine the number of devices which may be connected to the telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most areas, the sum of RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company.

If this device causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. The telephone company may request that you disconnect the equipment until the problem is resolved.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of this equipment. If this happens, the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

This equipment cannot be used on telephone company-provided coin service. Connection to party line service is subject to state tariffs. Contact the state public utility commission or public service commission for information.

When programming or making test calls to emergency numbers:

- Remain on the line and briefly explain to the dispatcher the reason for the call.
- Perform such activities in the off-peak hours such as early morning or late evenings.

The United States Telephone Consumer Protection Act of 1991 makes it unlawful for any person to use a computer or other electronic device to send any message via a telephone fax machine unless such message clearly contains, in a margin at the top or bottom of each transmitted page or on the first page of the transmission, the date and time it is sent, an identification of the business, other entity, or other individual sending the message, and the telephone number of the sending machine or such business, other entity, or individual. Refer to your fax communication software documentation for details on how to comply with the fax-branding requirement.

# Canada

### Industry Canada (IC)
### Unintentional emitter per ICES-003

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par Industrie Canada.

## Telecommunications per DOC notice (for products fitted with an IC-compliant modem)

The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operation, and safety requirements. The Department does not guarantee the equipment will operate to the users' satisfaction.

Before installing this equipment, users should make sure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the inside wiring associated with a single-line individual service may be extended by means of a certified connector assembly. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should make sure, for their own protection, that the electrical ground connections of the power utility, telephone lines, and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

**Warning**

To avoid electrical shock or equipment malfunction do not attempt to make electrical ground connections by yourself. Contact the appropriate inspection authority or an electrician, as appropriate.

The **Ringer Equivalence Number** (REN) assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

# Laser safety statement

All Gateway systems equipped with CD and DVD drives comply with the appropriate safety standards, including IEC 825. The laser devices in these components are classified as "Class 1 Laser Products" under a US Department of Health and Human Services (DHHS) Radiation Performance Standard. Should the unit ever need servicing, contact an authorized service location.

**Warning**

Use of controls or adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure. To prevent exposure to laser beams, do not try to open the enclosure of a CD or DVD drive.

# Notices

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Poway, CA 92064 USA

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# Index


## A

accessories
  safety precautions 130
add-in card
  *see* card
adding
  *see* installing
addresses
  I/O 114
administrator password 36
Advanced menu
  BIOS Setup utility 72, 124
automated troubleshooting system 104

## B

backing up files 27
battery
  location 6
  replacing 68
  troubleshooting 86
beep codes 86
BIOS
  Bypass Password jumper 77
  bypassing passwords 77
  recovering 73
  Reset BIOS jumper 75
  resetting 75
  resetting passwords 77
  troubleshooting 88
  updating 73
BIOS Setup utility 71
  Advanced menu 72, 124
  Boot menu 72, 127
  Exit menu 72
  Main menu 72, 124
  menus 72, 124
  navigating through 72
  opening 72
  passwords 36
  Power menu 72, 127
  recording configuration 35
  Security menu 72, 127
  settings 123
  troubleshooting 88
  viewing settings 123
Boot menu
  BIOS Setup utility 72, 127

## C

card
  installing 56
  replacing 56
  retention cover 5
  slot location 6
  troubleshooting 90
case
  closing 44
  opening 42
CD
  cleaning 89
  Server Companion 7, 38
  troubleshooting 88, 89
CD drive
  installing 46
  location 3
  replacing 46
  troubleshooting 88
Certificate of Authenticity 5
cleaning
  CD 89
  keyboard 29
  mouse 30
  screen 29
  server exterior 28
  tape drive 29
closing
  case 44
  unresponsive programs 16
CMOS battery
  *see* battery

conditioner
line 12
connections
auxiliary power 6
diskette drive 6
front panel 6
IDE 6
intrusion switch 6
keyboard 5
LAN 5
lock slot 5
main power 6
monitor 5
mouse 5
network 5
parallel 5
power cord 5
processor fan 6
rear fan 6
serial 5
USB 3, 5, 6
VGA 5
cover panel
closing 44
removing 42
creating
repair diskette 32
startup diskettes 32

## D

defragmenting hard drive 25
deleting files and folders 24
device drivers
installing 38
Disk Cleanup 24
Disk Defragmenter 25
diskette
repair 32
startup 32
diskette drive
installing 46
location 3
replacing 46
system board connector 6
troubleshooting 89
display
*see* monitor
documentation
Gateway Web site 7
online help 7
Server Companion CD 7
drivers
installing 38
drives
backing up files 27
CD 3
checking for errors 24
checking for free space 23
configuring 45
defragmenting 25
deleting files 24
diskette 3
hard drive 51
installing 45
installing CD 46
installing diskette 46
installing hard drive 51
replacing 45
replacing CD 46
replacing diskette 46
replacing hard drive 51
tape 27, 29
troubleshooting 88, 89, 91

## E

electronic specifications 114
electrostatic discharge (ESD) 41
environmental specifications 112
error messages 81
error-checking 24
eSupport 121
event log 37
Exit menu
BIOS Setup utility 72
expansion card
*see* card

## F

fan
- installing case 66
- processor connector 6
- replacing case 66

faxes
- troubleshooting 96

files
- backing up 27
- defragmenting 25
- deleting 24
- troubleshooting 90

fragmentation 25
front panel connector 6

## G

Gateway
- Learn@Gateway 105
- Learning Libraries 105
- stores 105
- Technical Support 103
- Web address 7
- Web site 7

## H

hard drive
- backing up files 27
- checking for errors 24
- checking for free space 23
- defragmenting 25
- deleting files 24
- installing 51
- replacing 51
- scanning for errors 24
- troubleshooting 91

hardware monitor specifications 110
heat sink 58
help 7

## I

I/O addresses 114
IDE
- BIOS configuration 124
- connectors 6
- drive configuration 45

installing
- battery 68
- case fan 66
- CD drive 46
- diskette drive 46
- drives 45
- expansion cards 56
- hard drive 51
- memory 54
- power supply 61
- processor 58
- system board 63

Internet connection
- troubleshooting 93, 96

interrupts
- PCI routing 119
- system 118

intrusion switch 6
IRQ assignments 118

## J

jacks
- *see* connections

jumper 6
- BIOS Reset 75
- Bypass Password 77
- locations 6

## K

Kensington lock slot 5
keyboard
- cleaning 29
- port 5
- troubleshooting 94

## L

LAN jack 5
line conditioners 12
lock
- Kensington 5

## M

Main menu
    BIOS Setup utility 72, 124
maintenance
    backing up files 27
    checking drive for errors 24
    checking hard drive space 23
    cleaning case 28
    cleaning component exteriors 28
    cleaning keyboard 29
    cleaning mouse 30
    cleaning screen 29
    creating repair diskette 32
    creating startup diskettes 32
    defragmenting 25
    deleting files 24
    general guidelines 20
    ManageX Event Manager 36
    recording BIOS configuration 35
    recording system configuration 35
    scanning drive for errors 24
    suggested schedule 21
    system recovery 32
    virus protection 22
ManageX Event Manager 36
memory
    installing 54
    map 117
    slot location 6
    troubleshooting 95
messages 81
Microsoft Certificate of Authenticity 5
modem
    connection speed 96
    troubleshooting 95
monitor
    cleaning 29
    port 5
    troubleshooting 98
mouse
    cleaning 30
    port 5
    troubleshooting 99

## N

network jack 5
non-technical support
    Accounting 104
    Sales 104
    Warranty 104

## O

online help 7
opening case 42
operating system
    setting up 17

## P

parallel port 5
password
    administrator 36
    bypassing 77
    user 36
PCI card slot 6
PCI expansion card
    *see* card
PCI interrupt routing 119
ports
    *see* connections
POST (power-on self-test) 14
power
    auxiliary connector 6
    button 3, 13, 15, 16
    cord connector 5
    LED 3, 13
    line conditioners 12
    main connector 6
    protecting from surges 11
    source problems 11
    static electricity 41
    surge protectors 11
    troubleshooting 100
    uninterruptible power supply (UPS) 12
Power menu
    BIOS Setup utility 72, 127
power supply

installing 61
replacing 61
uninterruptible 12
power-on self-test 14
printer
troubleshooting 100
processor
fan connector 6
heat sink 58
installing 58
location 6
replacing 58
troubleshooting 102
programs
closing unresponsive 16


## R


rear fan connector 6
rebooting server 16
recovering
BIOS 73
system 32
Recycle Bin 90
release latches 5
removing
case fan 66
cover panel 42
files and folders 24
repair diskette 32
replacing
*see* installing
resources
I/O addresses 114
interrupts 118
memory map 117
restarting server 16


## S


safety
general precautions 10, 129
guidelines for troubleshooting 80
static electricity 41
saving system configuration settings 35
scanning drive for errors 24
screen
cleaning 29
troubleshooting 98
security
administrator password 36
event log 37
monitoring case access 37
set passwords 36
setting up in BIOS 36
system 36
using passwords 36
Security menu
BIOS Setup utility 72, 127
serial number 5, 103
serial port 5
Server Companion CD 7, 38
setting up
hardware 10
operating system 17
safety precautions 10, 20, 129
Setup utility
*see* BIOS Setup utility
slots
card 6
memory 6
processor 6
specifications
electronic 114
environmental 112
finding 121
hardware monitor 110
system 108
system board 109
temperature sensor 111
video 113
startup diskettes 32
static electricity 41
surge protector 11
system
administration 36
control 36
management 36

recovery 32
security 36
specifications 108
startup 13
system board
Bypass Password jumper 77
components 6
installing 63
replacing 63
Reset BIOS jumper 75
specifications 109
system configuration
protecting with passwords 36
recording 35
system interrupts 118
system recovery
creating repair diskette 32
creating startup diskettes 32
recording BIOS configuration 35
recording system configuration 35

## T

tape drive
cleaning 29
using 27
Task Manager 16
Technical Support 103, 104
technical support
automated troubleshooting 104
FaxBack support 104
resources 103
Technical Support 104
tips before contacting 103
telephone support 103
temperature sensor specifications 111
training
CD 105
Gateway Learning Libraries 105
Learn@Gateway 105
virtual classroom 105
troubleshooting
add-in card 90
automated system 104
battery 86
beep codes 86
BIOS 88
card 90
CD 88
CD drive 88
cleaning CD 89
diskette drive 89
error messages 81
expansion card 90
fax send and receive speed 96
faxed answers 104
files 90
general guidelines 85
hard drive 91
Internet connection 93, 96
keyboard 94
memory 95
modem 95
monitor 98
mouse 99
power 100
power source problems 11
printer 100
processor 102
safety guidelines 80
screen area 98
technical support 103
telephone support 103
Web site connection speed 94
turning off server 15
turning on server 13

## U

uninterruptible power supply (UPS) 12
updating BIOS 73
UPS 12
USB port
location 3, 5
system board connector 6
user password 36
utilities
BIOS Setup 72

## V

VGA port 5
video specifications 113
virus protection 22
volume
    adjusting modem 98

## W

Web site 7
Windows 2000 Server
    recording configuration 35
    repair diskette 32
    setting up 17
    startup diskettes 32

A MAN 920 SYS GDE R2 12/02